DOCUMENT RESUME

ED 323 101 SE 051 555

AUTHOR Depenbusch, Joyce Harmon
TITLE Food for Wildlife. Teacher's Guide and Student Guide, Grade 2.
INSTITUTION Kansas State Dept. of Wildlife and Parks, Pratt. Wildlife Education Service.
PUB DATE 87
NOTE 74p.; For related documents, see SE 051 553-559.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052) -- Guides - Classroom Use - Materials (For Learner) (051)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Conservation (Environment); *Elementary School Science; *Environmental Education; Grade 2; Instructional Materials; Interdisciplinary Approach; Natural Resources; Primary Education; Science Education; Science Materials; Teaching Guides; *Wildlife
IDENTIFIERS *Habitats

ABSTRACT

"Food for Wildlife" is a part of a series of materials in the Wildlife Education Service for Kansas youth series. The goal of the program is to provide information about wildlife and to establish in children an awareness and appreciation of wildlife. A booklet for children and a teacher's guide are included. The booklet was written for second-grade children but can be easily adapted for other grades. The materials are designed for multidisciplinary use. The teacher's guide includes the following materials: (1) an introduction and foreword; (2) an opinionnaire about the materials; (3) a student award form; (4) ideas for classroom bulletin boards; (5) reproducible worksheets for students; (6) supplemental activities and approaches for language arts, science, art, industrial arts, mathematics, social studies, music, and physical education; and (7) appendices which list resources and references, and includes a glossary of terms used in teaching this topic. (CW)

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Food for Wildlife

Teacher's Guide

SE051555

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KANSAS WILDLIFE AND PARKS

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Teacher's Guide

Food for Wildlife

Comprehensive Program Written and Developed by

Joyce Harmon Depenbusch

Wildlife Education Coordinator

Design and Illustration by

Alan W. Baccarella

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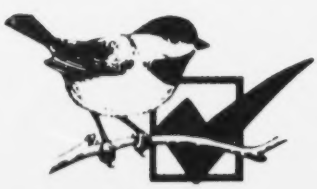
KANSAS WILDLIFE AND PARKS

A series of wildlife education materials for Kansas youth from Kansas Wildlife and Parks

**THIS MATERIAL IS DEDICATED TO THE CHILDREN OF KANSAS;
MAY THEY KNOW A LOVE OF WILDLIFE.**

Funded by hunting and fishing license fees and the
Nongame Wildlife Tax Check-Off Program

Wildlife Education Service
Kansas Wildlife and Parks
Box 54A Route 2
Pratt, Kansas 67124



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FOOD FOR WILDLIFE

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KANSAS FISH AND GAME

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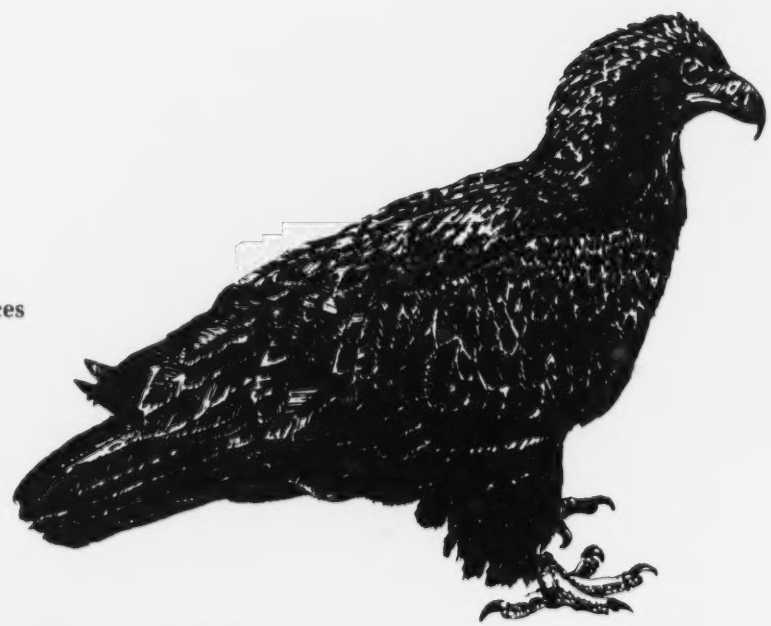

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Introduction

FOOD FOR WILDLIFE is part of a series of materials in the Wildlife Education Service for Kansas youth from the Kansas Department of Wildlife and Parks. (See inside cover of the student booklet for other titles.) The material is designed for use by teachers. The goal of the program is to provide information about wildlife and to establish in children an awareness and appreciation of wildlife. This booklet was written for second grade but can be easily adapted for other grades. The study of wildlife need not be limited to science class but should be multidisciplinary. Enrich your existing curricula with this material.

You do not have to be a biologist or wildlife expert to teach about wildlife. The Wildlife Education Service materials were written for anyone who has an interest in teaching children about wildlife and the environment. The worksheets and activities in the teacher's guide reinforce information in the student's booklet. Do any quantity or combination of activities and worksheets that are appropriate for your schedule. The lessons may be used as a unit of study or used throughout the year when time allows. The worksheets may be done in whatever sequence you choose.

ONE set of each grade's materials will be provided to each school to be shared among the teachers. The booklet may be reproduced if additional copies are needed or you choose to have copies for students to take home.

The Department of Wildlife and Parks has a Wildlife Reference Center located at the Pratt headquarters. The center includes films, filmstrips, slide series, games, posters, books, and other wildlife related material available to schools on a free loan basis. Return mail cost is the only expense to the school for use of this material. Refer to your Wildlife Reference Center catalog for materials appropriate to your study. Especially recommended for use with this booklet are: FS-15E, Ways Animals Get Food; FS-5, Animals and How They Grow; FS-16, Observing Living Things, LK-2, How Animals Get Food; and 3-9, Invite Birds to your Home. Be sure to check your Wildlife Reference Center catalog for other materials. A catalog has been sent to each school district office. Please contact your administration office for your district's copy. Orders will be filled on a first-come, first-served basis, so we suggest sending your requests in early.

To be effective, material must be used. This format was written to be easy to use, ready to use, and flexible. Little additional preparation or equipment is required. The most important ingredients for success in your lessons will be your enthusiasm and imagination. Technical references can be obtained from the Wildlife Reference Center or your local library.

The material is appropriate throughout Kansas, no matter what size community or region of the state you live in. It is not necessary to have a natural area near your school; use whatever is available. Many of the supplementary activities can be done on the schoolgrounds or in the classroom.

This program was funded from hunting and fishing license fees and partially by the Nongame Wildlife Tax Check-off Program.

Remind your students that when they are outside they are company in the homes of wildlife; therefore, their best manners should be used.

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Foreword

Dear Teachers,

Kansas has a diversity of climate, terrain, and vegetation that provides for a variety of wildlife. Use these attributes to the fullest in your classroom. Tap your students interest in wildlife in all curricula areas by exploring what Kansas wildlife has to offer. People, especially children, need to be more aware of wildlife and how their actions affect wildlife. The future of wildlife depends on actions we make today. Educate our young people to care about their future and the future of wildlife.

You can do me a favor by contacting the K-6 teachers in your district and letting them know, or reminding them of, what the Wildlife Education Service has to offer. I've sent out curriculum, Wildlife Reference Center catalogs, and numerous other resource materials to every public and private building in the state. I've tried every avenue within budgetary limits, that I can think of to inform teachers, librarians, and administrators of the Wildlife Education Service. A reminder from you may get them involved.

Let me know how I can help you better inform you district's teachers. If the K-6 curriculum and other materials that have been sent are lost or misplaced, contact me for a limited number of replacement sets. Thank you for your help.

Please direct any questions or comments concerning the Wildlife Education Service materials to me at the Pratt headquarters. Good luck for a successful and exciting learning experience.

Sincerely,

Joyce Harmon Depenbusch

Joyce Harmon Depenbusch
Wildlife Education Coordinator
Kansas Wildlife and Parks
RR 2 Box 54A
Pratt, Kansas 67124

A true conservationist is a man who knows that the world is not given by his fathers, but borrowed from his children.
— John Madson

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KANSAS FISH AND GAME

Opinionnaire

Your input is important in continuing and improving this program. Any comments or ideas you want to share would be appreciated. Please complete the opinionnaire below or send your suggestions on a separate sheet to:

Joyce Harmon Depenbusch, Wildlife Education Coordinator
Kansas Department of Wildlife and Parks
RR 2 Box 54A
Pratt, Kansas 67124

Title of unit_____ Grade you teach_____
School district_____

The materials were:
_____ very useful _____ moderately useful _____ of no use

Students were:
_____very interested _____moderately interested _____not interested

The materials were appropriate for the grade you teach. ( ) yes ( ) no
(if no, list more appropriate grade)_____

Rank each of the following components on a scale of 1 to 5 based on their value for your use. (1 represents highest grade; 5 represents lowest grade)

_____ student booklet
_____ bulletin board idea
_____ student award
_____ worksheets
_____ supplementary activities & approaches
_____ glossary
_____ resources & references
_____ Wildlife Reference Center

List favorite worksheet (s) or activity (ies)

List curricula areas where you used the material

Approximate amount of time (hours, days) spent using the material

Changes you would recommend. Please be specific.

Other comments

7

Thank you for your time and effort.

After students have successfully completed their study of this aspect of wildlife, award their progress. Copies can be made of this award and presented to them at the end of your unit of study.

Wildlife Awareness Award

IS PRESENTED TO

_____
name

For outstanding progress shown in the study of Kansas Wildlife

on _____ at _____
date school

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KANSAS WILDLIFE AND PARKS

_____
signed

motif by Daisy Baughman

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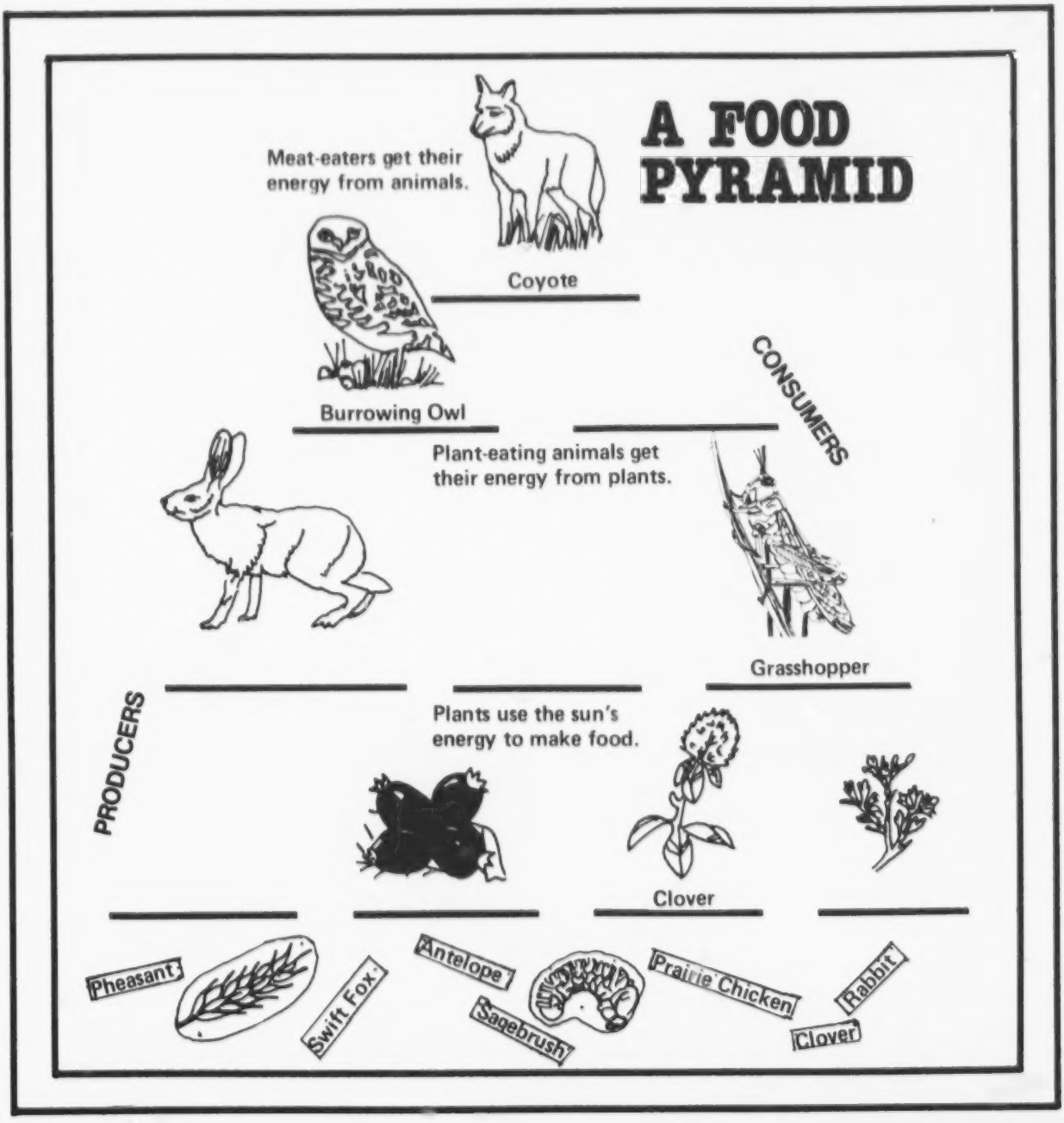
FOOD PYRAMID BULLETIN BOARD

Use the following as a guideline for a bulletin board and/or worksheet. Pictures from the booklet can be copied or enlarged with an opaque projector. Other good sources of pictures are nature or conservation magazines.

Students complete the food pyramid with appropriate animals and label the animals in the space below the picture.

Directions: Fill in the missing spots with animals that fit the food pyramid. Print their names in the space below.



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NUMBER KNOW-HOW

Directions: Use *Food for Wildlife* to answer these questions. You can use a name more than once.

1 _____

Find 1 animal that eats scorpions.

_____

_____ 2

_____

Find 2 animals that eat acorns.

_____

_____ 3

_____

Find 3 animals that eat mammals.

_____ _____

_____ 4 _____

_____

Find 4 animals that eat berries.

_____

_____

_____ 5 _____

_____

_____

Find 5 animals that eat plants.

_____

_____

_____ 6 _____

_____

_____

Find 6 animals that eat insects.

NAME _____

Illustrated by Daisy Baughman

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NAME_____

Wildlife Mix 'n' Match

Match the animal with the sentence that describes it. Print the animal's name in the blank below its picture. Use *Food for Wildlife* if you need help.

_____

_____

It uses its beak and tongue to get its food.

A plant-eating insect.

An amphibian that eats insects, worms, and snails.

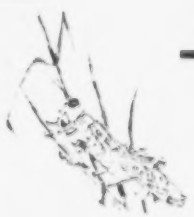
_____

_____

A mammal that eats rabbits, mice, and watermelon.

This bird eats grain, caterpillars, ants, crickets, and weed seeds.

_____



_____

Hunts for meals of scorpions, lizards, and snakes.

A plant-eater that browses on sagebrush, grasses, and other prairie plants.

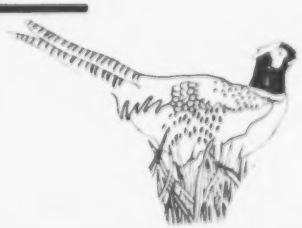
_____

_____

A small plant-eater that likes clover and grass.

A reptile that eats worms, snails, insects, and berries.

_____



_____

It feeds on insects and fish by using its sense of smell and taste.

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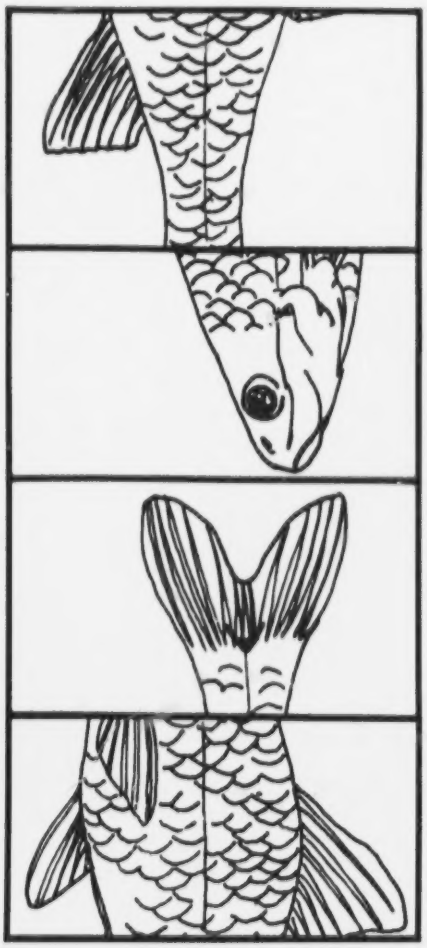
Animal Scramble

Directions: Build a familiar animal from *Food for Wildlife* by cutting out the picture pieces.



Illustrated by Daisy Baughman

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PYRAMID POWER

NAME _____

You have seen in **Food for Wildlife** the many kinds of foods eaten by animals. We call the plant-eaters **HERBIVORES**, the meat-eaters **CARNIVORES**, and animals that eat plants and meat **OMNIVORES**.

A **food pyramid** can be drawn to show the balance of animals in nature. Plant-eaters all need green plants. Meat-eaters eat the plant eaters. Fill in the food pyramid with the names of plants and animals from the booklet that belong there. A few have been done for you.

Which group of animals is the largest?

_____

Which group has the smallest number of animals?

_____

What is another name for:

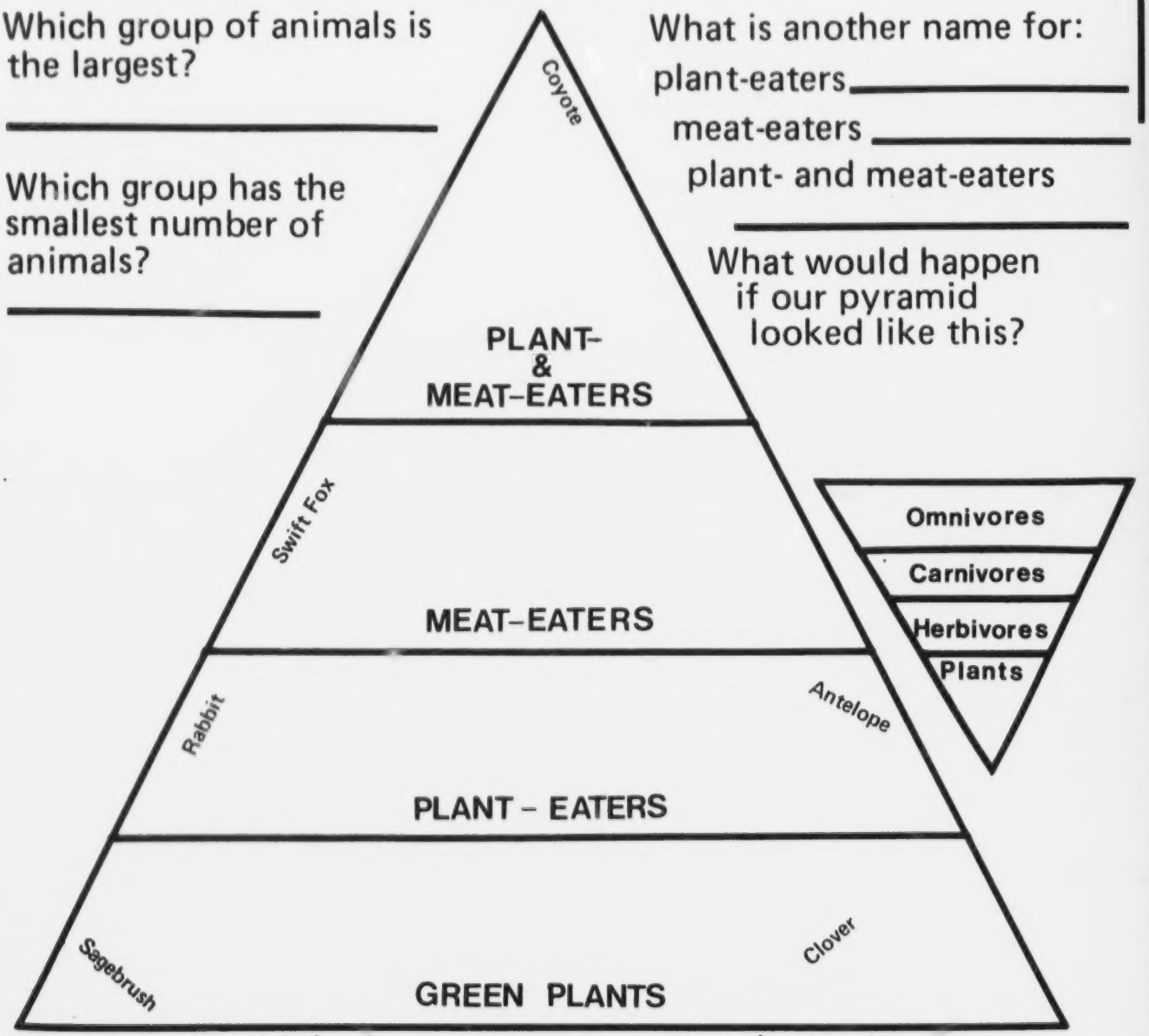
plant-eaters _____

meat-eaters _____

plant- and meat-eaters

_____

What would happen if our pyramid looked like this?



Why do you think there are more green plants than any animal group? _____

_____

FOOD FOR WILDLIFE

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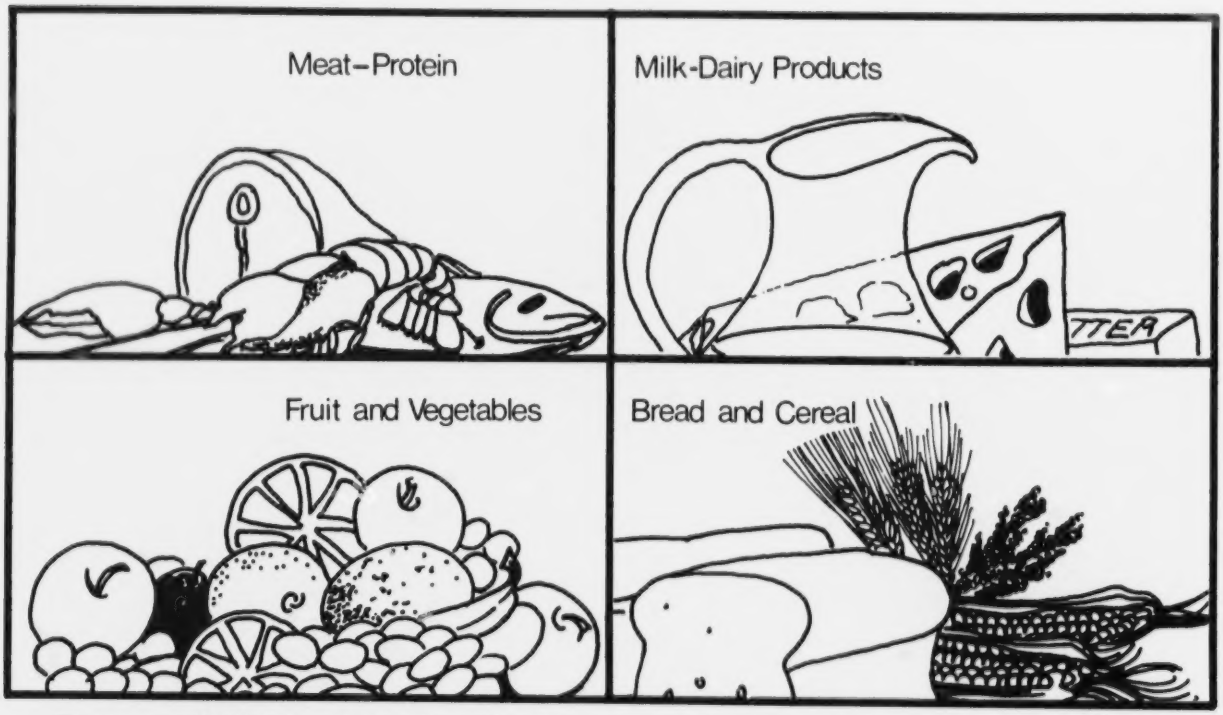
KANSAS FISH AND GAME

NAME_____

MEAL PLANNING

When you plan a menu at home, you try to find foods in all four food groups. List foods that fit the four food groups.



Does wildlife pick foods from each group?

Wildlife eats_____ and/or_____

night nibblers

Many animals look for their food during the day but some animals hunt for food at night. They are called **nocturnal** animals.

CHALLENGE:

Choose one night nibbler (nocturnal animal) and research what it eats.

FOOD FOR WILDLIFE

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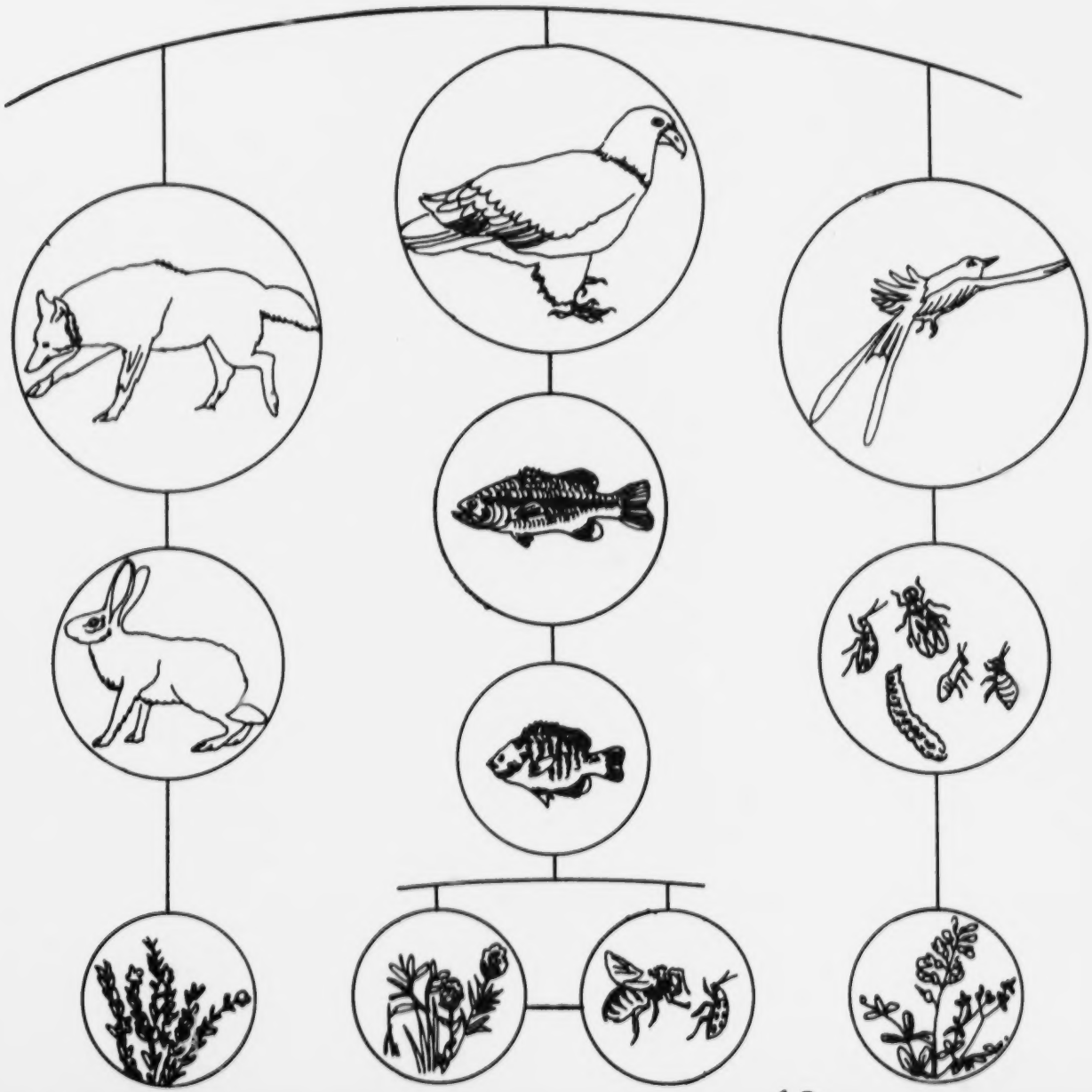
A MOBILE FOOD CHAIN

Directions: Plants and animals need each other. A FOOD CHAIN shows the relationship of plants and animals. Study the example below, then build your own food chain mobile from paper, string, glue, and pictures. Where do people fit into the food chain?



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RACE FOR FOOD: EAT OR BE EATEN

CONSTRUCT A PREDATOR-PREY RACE BY MAKING TWO OF EACH OF THE ANIMALS IN EVERY SET. GLUE EACH PIECE ONTO CARDBOARD. PUNCH A HOLE IN THE MIDDLE OF THE ANIMAL, PUT A ONE-YARD PIECE OF STRING THROUGH THE HOLE, AND TIE THE STRINGS TO THE END OF EACH DOWEL. ATTACH A RUBBER BAND ONTO THE MIDDLE OF ONE OF THE DOWELS. HOLD THE RUBBER BAND WHILE SOMEONE MOVES THE OTHER END BACK AND FORTH OVER A ROUGH SURFACE. WILL THE PREDATORS CATCH THE PREY, OR WILL THE PREY ARRIVE SAFELY AT THE END OF THE RACE?

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? Wildlife Riddles ?

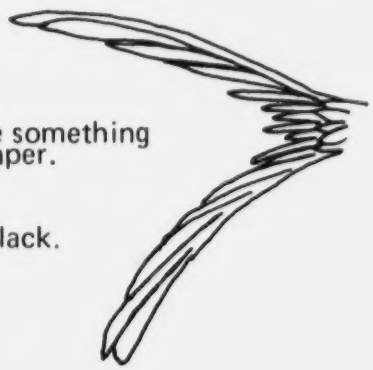
NAME_____

Directions: Can you guess which animal these riddles are talking about?

I eat plants.
I can jump high.
I live in grassy fields.
I have 6 legs.
I am green and brown.
I am an insect.

I eat insects, crayfish, and fish.
I live in the water.
I have barbels that look like whiskers.
I am brown and have fins.
I find my food by smelling and tasting.
I am a fish.

I eat insects.
I can fly.
My tail looks like something you use to cut paper.
I have 2 legs.
I am white and black.
I am a bird.



I eat worms, insects, and berries.
I move slowly over the land.
I carry my home with me.
I am brown, yellow, and black.
I have 4 legs.
I am a reptile.

I eat grasshoppers, scorpions, and lizards.
I live in the prairie.
I have 2 legs.
I am brown and gold.
I live in holes in the ground.
I am a bird.

I eat plants like sagebrush and grass.
I live in the prairie.
I have horns.
I am brown and white.
I have 4 legs.
I am a mammal.

I eat ants and beetle larvae.
I live near trees.
I can fly.
I am red, black, and white.
I have a long, sharp bill.
I am a bird.

I eat rabbits, mice, and watermelons.
I can live all over Kansas.
I have 4 legs.
I am brown.
I am related to the dog.
I am a mammal.

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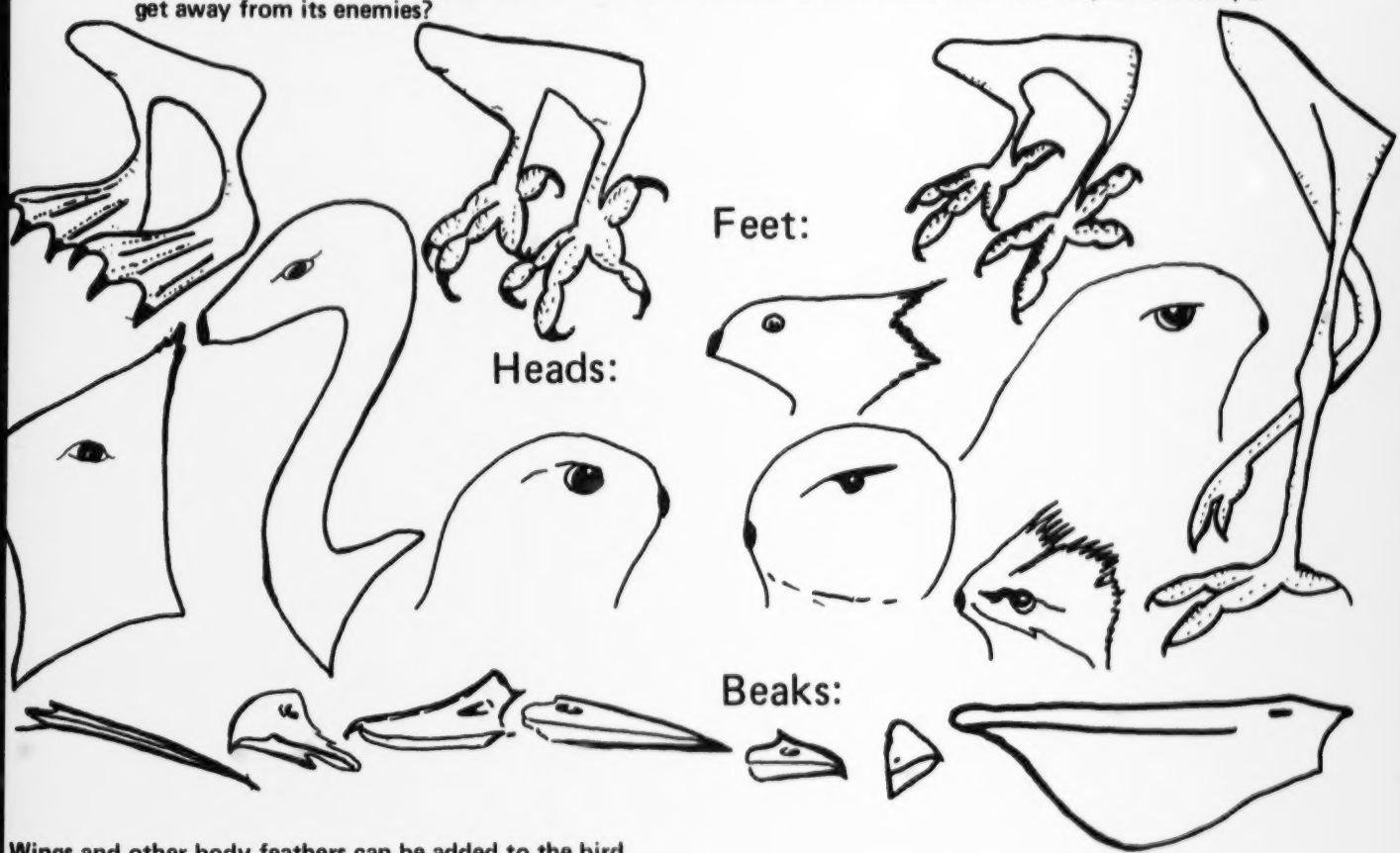
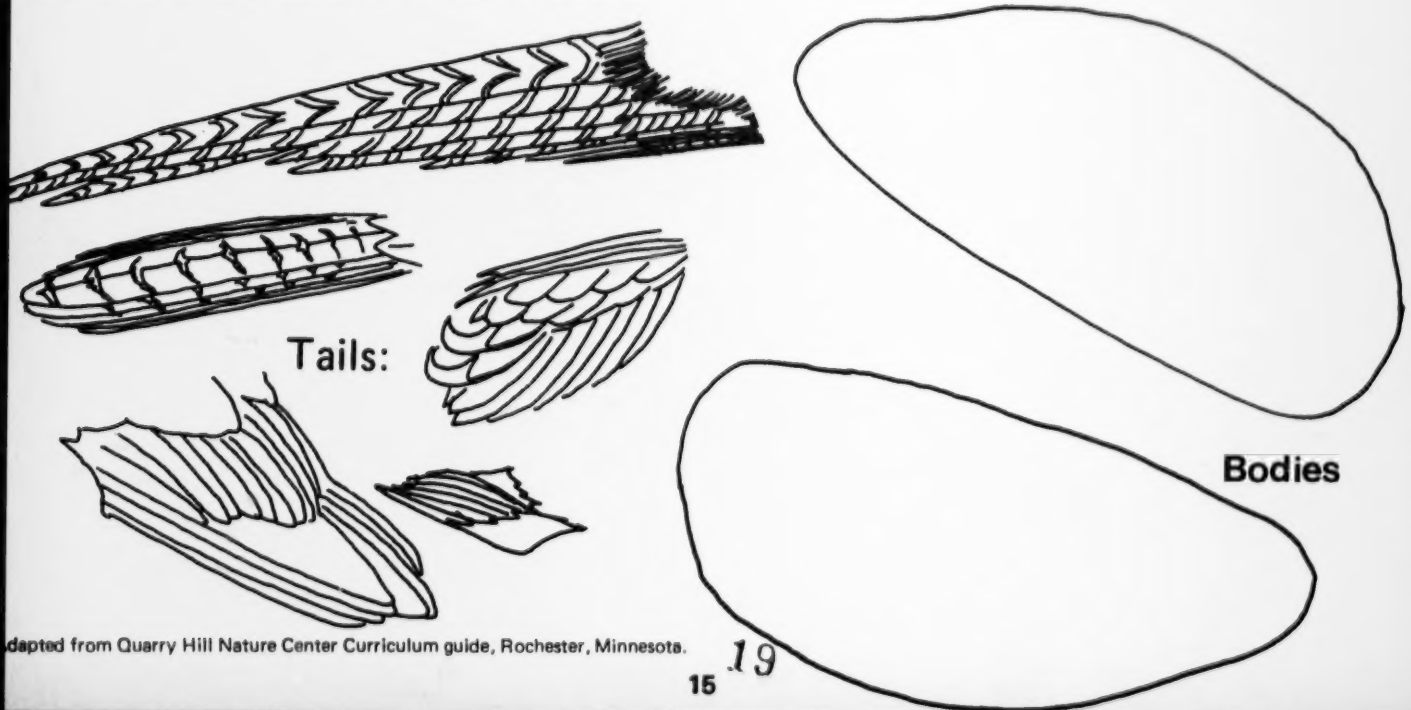
bird builders

Directions: Build a bird that would live in Kansas. What kind of food will this bird eat? Color the bird in a natural setting and print its name. Next, combine body parts to make an imaginary bird. Color and name it. What problems will the imaginary bird have when it tries to eat, build a nest, or get away from its enemies?



Wings and other body feathers can be added to the bird.



Adapted from Quarry Hill Nature Center Curriculum guide, Rochester, Minnesota.

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NAME_____

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Creative Creatures

You know how some real Kansas wildlife gets its food. Use your imagination to create an animal. Draw the animal, the food it eats, how it gets food, and what body parts it uses to get food. Put the animal in its natural surroundings (habitat) and make up a story to go along with your picture.

Here's an example:

The fishngamer lives in the prairie. It uses extra long eyelashes to catch its food of insects and rattlesnakes.

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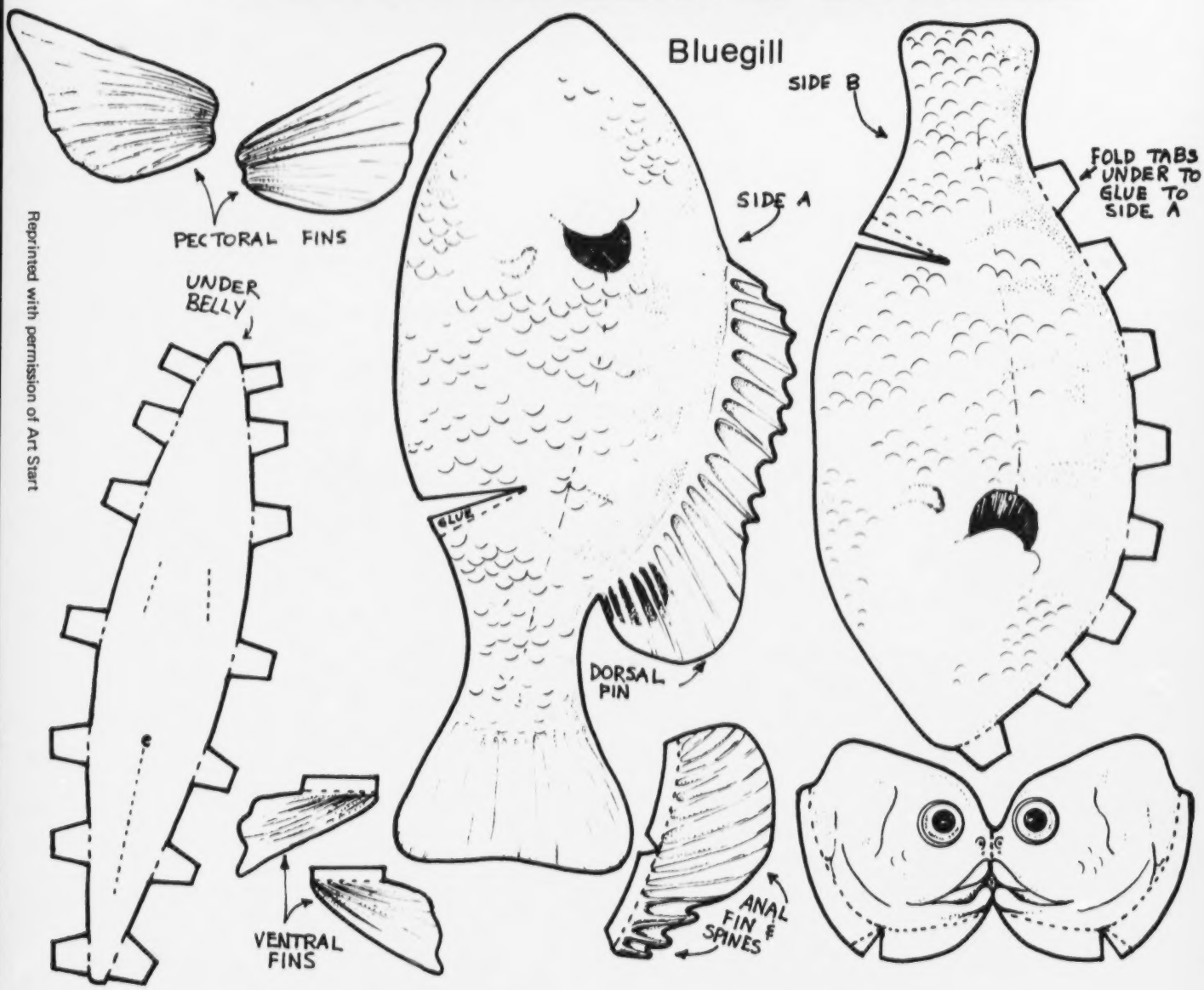
WILDLIFE IN ANOTHER DIMENSION



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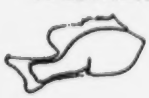
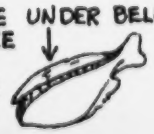
1. GLUE BOTH SIDES TOGETHER

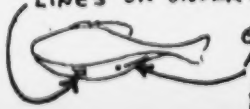


2 GLUE UNDER BELLY PIECE TO SIDES



3 GLUE PECTORAL FINS BELOW DARK HALF MOON SHAPE.

4. GLUE VENTRAL FINS TO SHORT DOTTED LINES ON UNDER BELLY

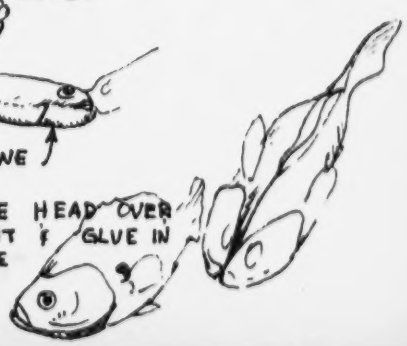


GLUE ANAL FIN ON LONG DOTTED LINE ON UNDER BELLY

5. FOLD HEAD ON DOTTED LINES

6. GLUE FLAPS OVER TO DOTTED LINE

7. SLIDE HEAD OVER FRONT & GLUE IN PLACE



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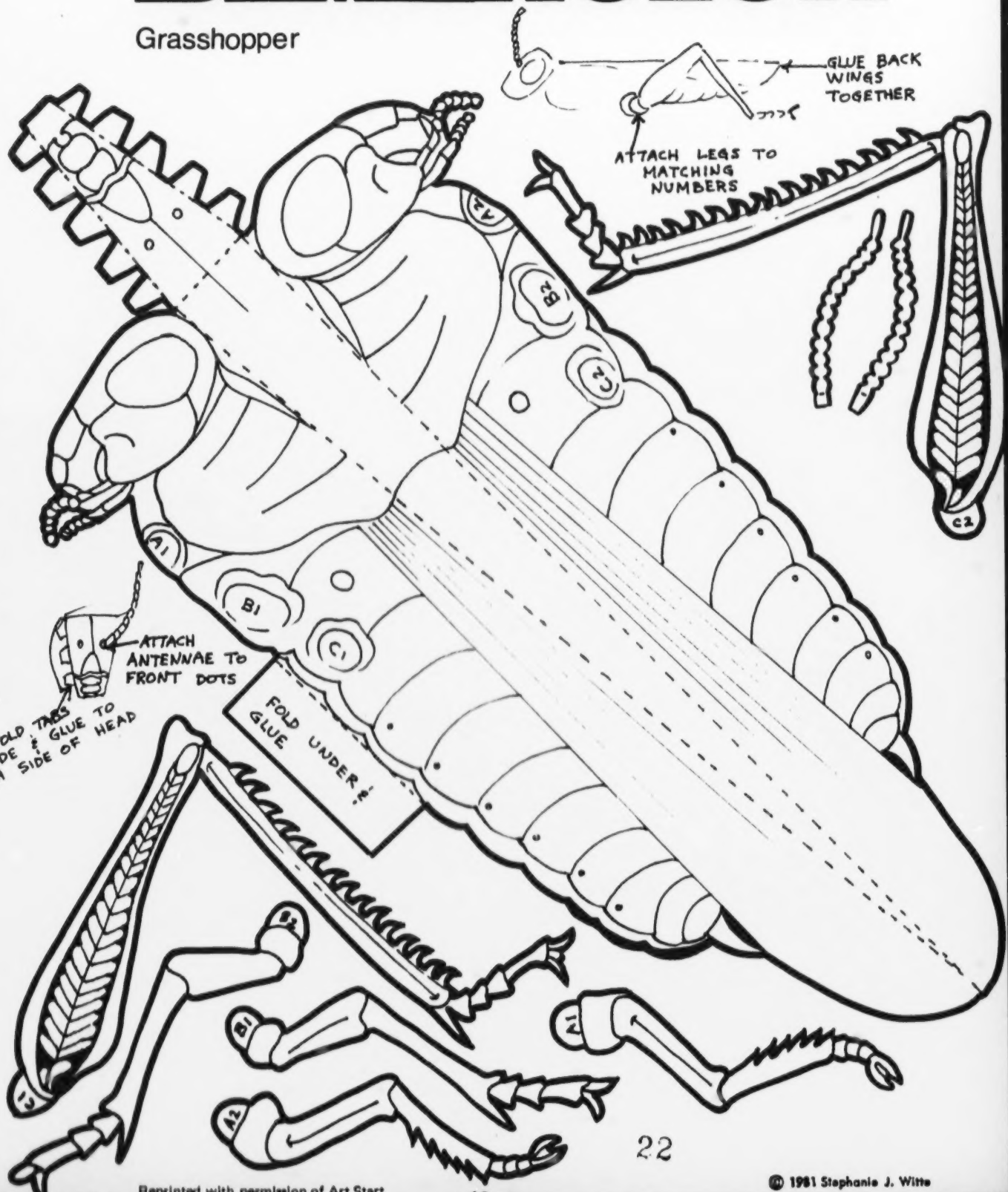
WILDLIFE IN ANOTHER DIMENSION

Grasshopper



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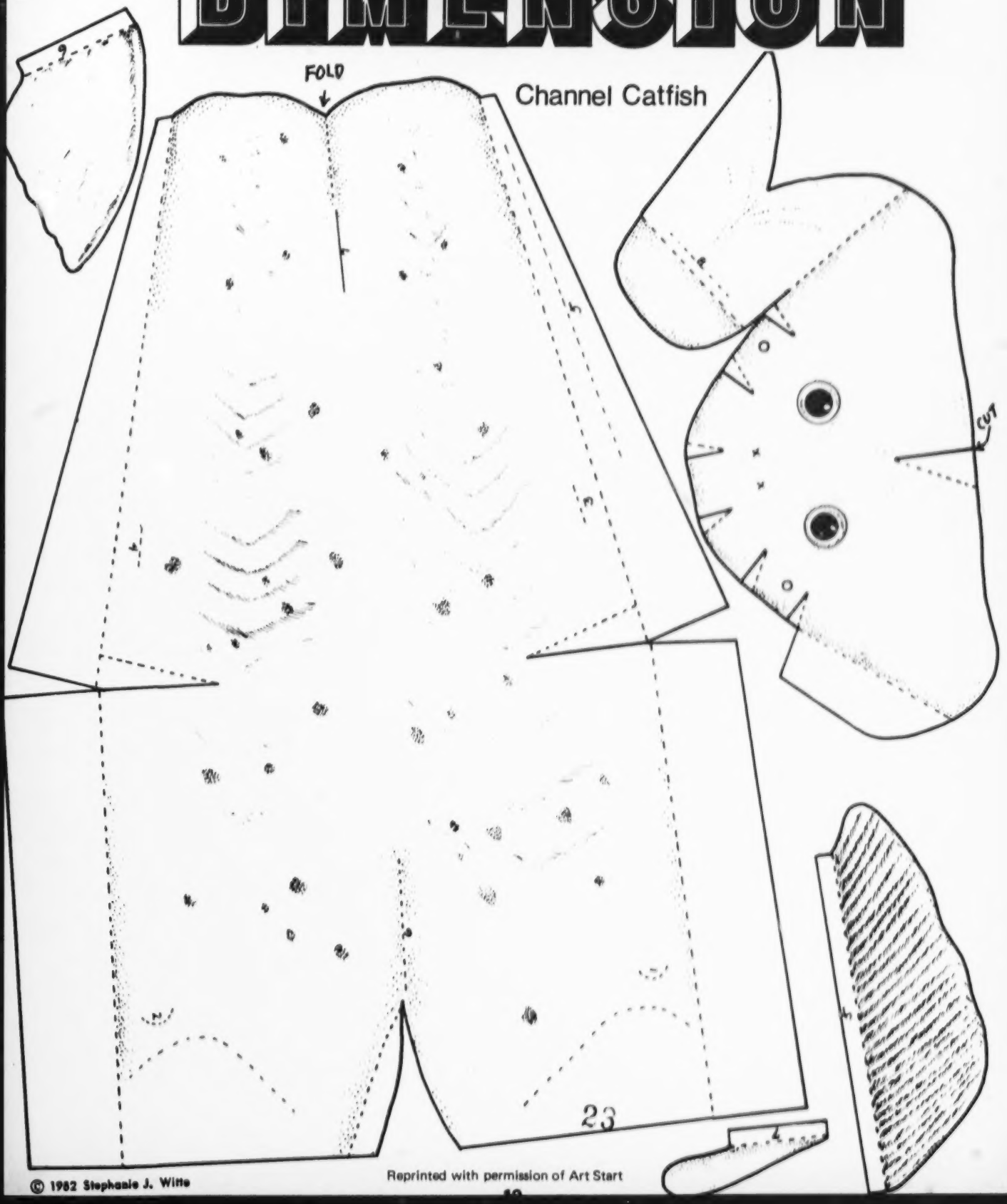

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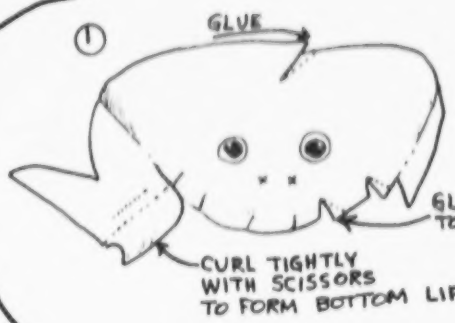
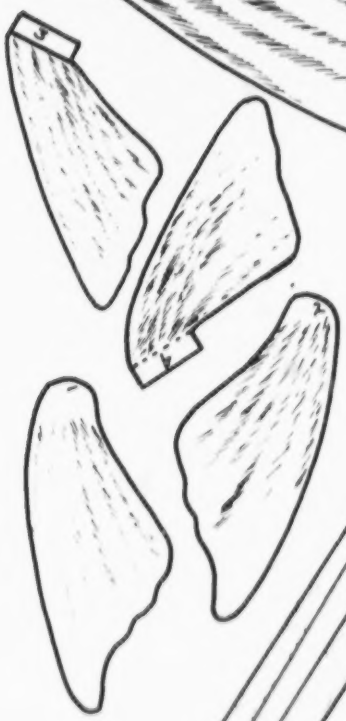
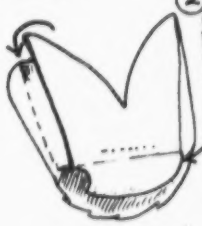
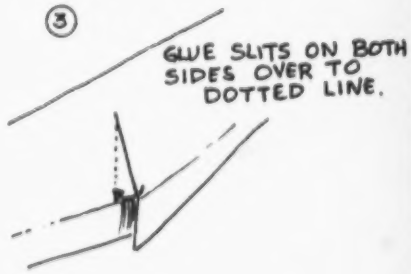
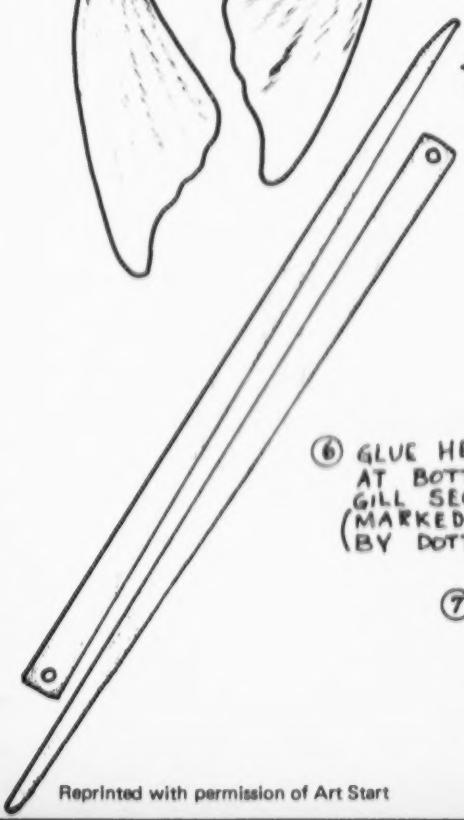
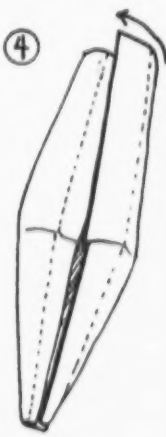


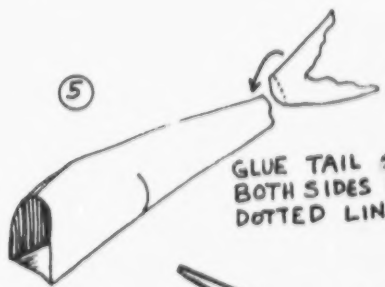










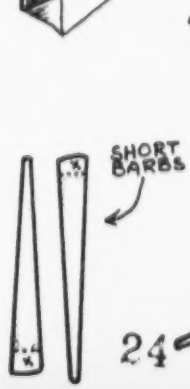


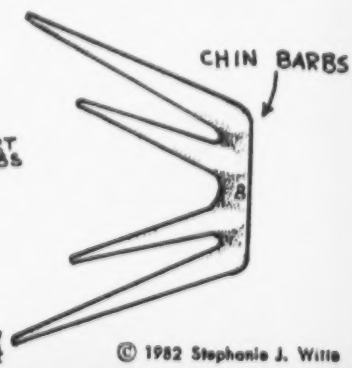
6 GLUE HEAD TO BODY AT BOTTOM AND AT GILL SECTIONS. (MARKED ON BODY BY DOTTED LINES.)

7 ATTACH FINS BY MATCHING NUMBERS.

ATTACH SHORT BARBS ON X'S ON HEAD.

LONG BARBS ATTACH ON O AT EACH SIDE OF UPPER LIP.





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FOOD FOR WILDLIFE

wildlife education service

KANSAS FISH AND GAME

NAME_____

wildlife hide 'n' seek

Find the names of Kansas wildlife species that *FOOD FOR WILDLIFE* talks about. Choose from among the species listed here. (Portion of name in parenthesis not listed. Long names may be found on separate lines.)

K	A	N	S	A	S	F	I	S	H	A	N	D	S	B	A	S	G	C
J	P	G	S	O	O	F	I	S	H	G	E	R	W	U	B	D	A	E
H	I	R	C	R	A	N	D	C	O	D	A	B	I	R	C	F	M	G
P	L	A	I	N	S	L	E	O	P	A	R	D	F	R	O	G	E	K
H	E	S	S	A	T	G	R	Y	R	E	H	I	T	O	D	R	J	L
E	A	S	S	T	I	C	D	O	O	A	M	N	F	W	O	E	T	C
A	T	H	O	E	B	A	E	T	N	O	P	Q	O	I	R	A	O	O
S	E	O	R	B	B	L	U	E	G	I	L	L	X	N	S	T	P	M
A	D	P	T	O	A	G	N	I	H	O	T	U	V	G	T	E	E	M
N	W	P	A	X	R	A	O	R	O	T	O	W	H	O	X	R	K	I
T	O	E	I	T	K	M	Y	I	R	Y	Z	S	N	W	L	A	A	S
J	O	R	L	U	C	E	D	A	N	O	L	T	E	L	E	N	S	S
R	D	A	C	R	A	N	H	R	H	F	A	E	F	G	H	D	H	I
M	P	E	F	T	J	J	S	P	T	I	J	K	L	M	N	L	I	O
H	E	A	G	L	A	I	M	A	L	O	P	R	S	E	A	E	N	N
R	C	B	Q	E	F	R	C	H	I	C	K	E	N	S	A	S	E	A
Y	K	R	T	C	O	M	M	I	S	S	I	O	N	S	E	S	R	E
E	E	R	K	A	N	S	A	S	F	I	S	H	A	N	D	E	D	C
S	R	G	A	M	E	C	O	M	M	I	S	S	I	O	N	R	N	D

coyote
burrowing owl
swift fox
pronghorn (antelope)
jack rabbit
cottontail (rabbit)
plains leopard frog
grasshopper
ornate box turtle
catfish
Topeka shiner
pileated woodpecker
pheasant
goose
scissortail (flycatcher)
bluegill
greater and lesser prairie chickens
Kansas Fish and Game Commission

FOOD FOR WILDLIFE

wildlife education service

NAME_____

QUIZ

Score _____

Circle the correct answer.

1. Wildlife eats different kinds of foods. They eat
plants or animals. candy. soil.

2. The scissortail flycatcher eats
grass. insects. berries.

3. The channel catfish finds its food by
digging. touching. smelling and tasting.

4. Which animal eats both plants and animals?
burrowing owl prairie chicken pronghorn antelope

5. What does the pileated woodpecker use to get insects from trees?
its beak and tongue its wings its red feathers

6. The Topeka shiner eats
bluegills. tiny plants and animals. radishes.

7. The ornate box turtle
stores its food in its shell. runs to catch its food.
eats plants and animals.

8. The plains leopard frog is an amphibian that eats
crickets and worms. grass and watermelon. coyotes.

9. Coyotes eat almost everything and can live in a lot of places. They are
reptiles. mammals. amphibians.

10. Cottontails, jack rabbits, and swamp rabbits are
meat eaters. eat both plants and animals. plant eaters.

wildlife education service

Supplementary Activities and Approaches

Listed below are approaches for using the student booklet and worksheets. Additional activities have been included for those teachers who are interested in furthering their study of wildlife. These activities can be done in a variety of curricula areas and are listed by subject. Basic skills will be practiced while students learn more about wildlife. Many of these ideas may already be familiar; others are new. A few of the activities were adapted from *Multidisciplinary Wildlife Teaching Activities*, by William Hernbrode, and *Sharing Nature With Children*, by Joseph Cornell. Check the Wildlife Reference Center for further activity sources. There are several excellent activity guides listed under Miscellaneous Books.

Language Arts

—The story script may be taped so that students may listen while they read.

—After reading the story, have your students make up their own stories or poems about the animals they have seen in the booklet. Students can act out their stories or draw pictures to express their ideas. Have the children think about what would happen if wildlife couldn't find the food it needs.

—The words in the script, and especially those listed on the vocabulary page, can be used on a spelling list. If you have an existing list, these could be added as bonus words. Introduce the words carnivore, herbivore and omnivore.

—Use the booklet as a supplementary reading text to study compound words, blends, vowels, syllabication, affixes, parts of speech, etc.

—Sequencing skills can be practiced if students draw pictures of wildlife in a comic strip format. Cut the pictures apart, exchange with a friend, and see if that person can reassemble the story in the correct sequence.

—How many words can students find that rhyme with the words in the vocabulary list?

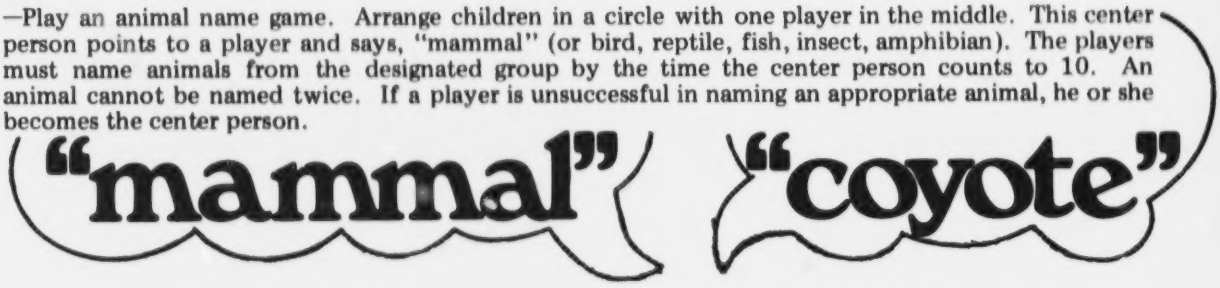
—Have students list natural things that begin or end with each letter of the alphabet, and make sentences from these words.

—If you read daily to your class, why not include stories or poems about animals and the environment, especially those related to Kansas? Recommend your favorite selections to the school or public library for their future purchases.

—Write plays or skits about wildlife and its habitat. Research the animals so that the role plays are true to life.

—Exchange letters with pen pals from a class in another state or different region of Kansas. Choose an area that has habitat different from your area. Students' letters should include descriptions of wildlife and habitats near their homes. What are the similarities and differences?

—Play an animal name game. Arrange children in a circle with one player in the middle. This center person points to a player and says, "mammal" (or bird, reptile, fish, insect, amphibian). The players must name animals from the designated group by the time the center person counts to 10. An animal cannot be named twice. If a player is unsuccessful in naming an appropriate animal, he or she becomes the center person.



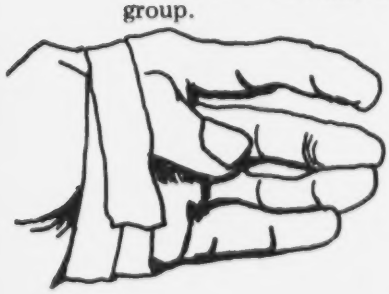
—Look at the vocabulary list at the end of the booklet and write the words so the class can see them. Assign each child a letter that is found in one of the words. More than one child can be a particular letter. The children are instructed to find other people who, when combined, will form a word from the list.

—Add variety to your spelling bees by practicing the vocabulary words at the end of the booklet. Instead of a regular spelling bee, though, have one child call out a word and at the same time throw a frisbee or soft ball out to the class. The player who catches the object spells out the word. If correct, he or she gains a point. If incorrect, the object is given to the person closest to him or her. The object is passed until the word is correctly spelled, then returned to the caller.

—Have students plan a menu for five of the animals in *Food for Wildlife*. Appropriate foods should be listed for each animal. Consider the difference in menu from summer to winter. Would the students want to share the animal's meal?

Science

—Take a 100-inch hike by measuring off an area approximately 100 inches long. Have students spread out along a line that is perpendicular to the first line. They move on hands and knees to count all the small animals that they find in the 100-inches. Use magnifying lenses, if available. Compare and discuss within the group.



—Animals are adapted for the foods they eat. Test your students' eating adaptations by taping one or both thumbs before lunch and for one class period. How well can they perform their tasks without the use of their thumbs?

—Nutrition can be studied with comparisons made between human and wildlife nutritional needs.

—Classify the animals into birds, mammals, fish, reptiles, amphibians or insects.

—Do outdoor challenges with students in groups of 2 or 3. Each team is given a challenge card. Possible challenges include: find 10 signs that wildlife is near; find 5 different seeds; find 5 plants that provide food for birds; find 5 objects with different shades of green (brown); find 5 signs that people are around; find 3 animal homes; find 5 objects, each of a different color. Gather the group together after 10 to 15 minutes and display collections and discuss. Care should be taken not to damage the environment while collecting.

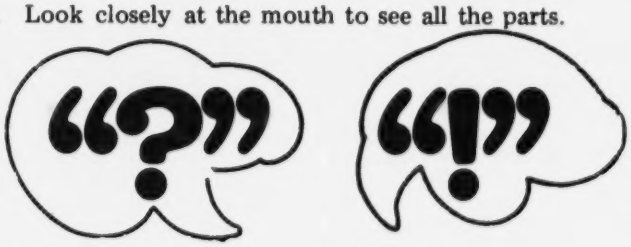
—Have a "touch and see" table in your classroom with tree bark, rocks, bones, shells, etc. that your students can explore in their free time. Add items that the children bring in. If you don't have room for a table, have a "touch and feel" box of appropriate size. Cut an opening for hand and arm and place objects inside that students may identify by touch only.

—Observational skills may be reinforced by watching a pet. A classroom animal will allow the entire class to make observations such as: What does the animal eat? Does it eat both plants and animals? How does it get its food? What body parts help it get food? Compare a big animal with a smaller one. Which eats more food? How does the amount of food eaten compare to the animal's body size?

—Classify the animals in the booklet into 3 groups: herbivore (plant-eater), carnivore (meat-eater), and omnivore (eats both plants and animals). Make your chart into a bulletin board or study center. Have the students cut out pictures and add other animals to the categories.

—Examine a grasshopper under a magnifying lens. Look closely at the mouth to see all the parts.

—Review animals in the booklet by pinning a picture of an animal on the back of one child. The other children can see the picture, but this child cannot. To discover his or her identity, the child must ask yes or no questions to the other members of the class.



—Mark off a 40- to 50-foot trail and place 10 to 15 man-made objects along it. The children walk silently along the trail trying to spot (but not pick up) as many of the objects as they can. When they reach the end of the trail, they whisper the number of objects they saw to you. If they missed any, see if they can find them on a second try. End with a discussion of camouflage, and natural and man-made things. What examples of natural camouflage did they find?

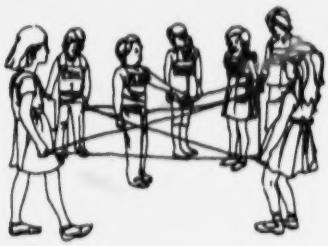
—Build a class terrarium so that children can observe animals such as snails, earthworms, beetles, etc. Children can observe the interaction of animals with plants. How are plants and animals alike, and how do they differ?

—Each child builds a nature trail for an ant or other small animal. They find five to ten interesting features in their area and mark them with twigs or popsicle sticks. These are the points of interest, or stations, on the trail as seen from the perspective of the small animal. Imaginations should be used to lead other students as spectators on the trail. An area of grass might be a jungle. A rock could be a cliff or mountain. Spectators follow the trail on hands and knees to observe the small aspects of the environment. Everyone should go on at least one tour of another child's trail. Discuss the word "micro" and the importance of small living things.

—To better understand the insect world, observe a variety of insects in your school yard. Attract them with strips of fabric soaked in sugar water or molasses. Notice the different sizes, shapes, and adaptations. Compare insects from as many habitats as possible.

—Start an ant colony in a narrow glass case. Students can easily see the underground world of the ants. What do they eat? How do they communicate? How do they use their antennae?

—Play the food web game. Each participant wears a name tag of a plant, animal, or element (air, sun, water, or soil). The name tags can be decorated with a picture of the plant, animal, or element. The name tags are made from 5x7 cards and can easily be worn if a piece of yarn is attached to go around the neck. Use animals and plants found in your area; some suggestions are: fish, cricket, snake, mosquito, owl, bluejay, turtle, bobcat, mushroom, trees, poison ivy, dandelion, etc. Have the group form



a circle close enough together so that they can read the other name tags. The person labeled "SUN" begins the game. He or she hangs onto the end of the yarn and passes the ball of yarn to any other player who has a direct need for the sun. The player who receives the ball of yarn looks around the circle for a player he or she needs in order to survive, or a player who depends on him or her for survival. He or she holds onto the strand of yarn and passes the ball to that next player. As the game progresses, discuss the relationships between the members of the web. Try to get all players involved and discuss why the elements and lower level organisms seem to have more yarn in their hands (therefore needing to have more organisms at that level than the upper levels.) Before enthusiasm wanes, discuss what impact people have on the food web. How does draining a marsh or pond, fire, disease, and restoring habitats affect the food web? Of course, we have some positive and negative impacts and the group might consider what they can do to keep the food web in a healthy state.

—Study protective coloration by scattering 30 toothpicks of five different colors (green must be one color) in a grassy area approximately 10 X 10 feet. A group of 3 to 5 children pretend they are birds looking for food (i.e. toothpicks). They have five minutes to collect their food. The remaining groups of children take their turn. See which colors were most frequently found. Why would the green toothpicks be found less frequently than the other colors? Which color "food" is the safest from birds? Is color important in nature? Would the time of year change which color is frequently found?

—In your school yard, set up a platform about four feet off the ground. Place on it pieces of string, yarn, cloth, small sticks, and other items that birds might use to build a nest. Keep records of which items are taken. Do the birds seem to choose one item over another? Can anyone spot the colored yarn and string in nearby nests?

—Take a census of natural and man-made things in your school yard. Divide the natural list into plants and animals. Take another census of living and non-living things.

Art

—Design wildlife bookmarks or book jackets. Cover surface with clear contact paper for durability.

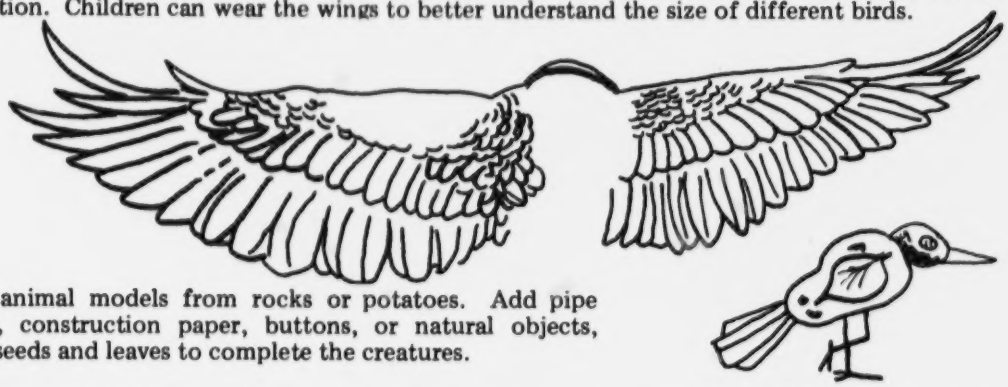
—Build dioramas of animals in their habitat. Use modeling clay, shoe box, fabric, paint, etc.

—Construct nature mobiles. Gather sticks or branches to support the mobile and attach natural or un-natural objects with string or yarn. These objects can be collected while on a hike, but care should be taken that damage is not done to the environment. Students can hang their mobiles in the classroom or take them home to share.

—In small groups, paper mache one or more of the animals in the book.

—A food web mobile example is shown in the worksheets. Have each student make a food chain for a different animal. Pictures can be drawn or cut out from magazines.

—Make a set of life-sized bird wings for each of the birds in the story so that a comparison can be made between birds. Use field guides from the Wildlife Reference Center or local library for detailed information. Children can wear the wings to better understand the size of different birds.



—Build animal models from rocks or potatoes. Add pipe cleaners, construction paper, buttons, or natural objects, such as seeds and leaves to complete the creatures.

—Make jigsaw puzzles from the children's animal drawings or from copies of the booklet drawings.

—While hiking through different habitats, collect natural objects such as seeds, pine cones, dead twigs, dried mushrooms, etc. to make a nature picture or class collage. Items can be glued to cardboard and may be separated by habitat to form a three-dimensional habitat artifact collection.

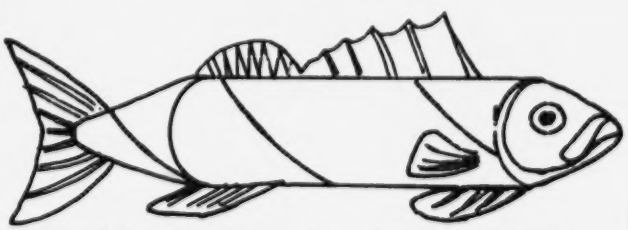
—The worksheets include three-dimensional models of a few of the animals mentioned in the booklet. See if you or your students can design other animals by using these as patterns. You may want help from volunteers when children are working on these projects.

—Wildlife is not only a variety of colors and shapes but also different patterns. Notice the interesting patterns in butterflies, fish scales, spider webs, feathers, etc. Combine these designs in a drawing or painting.

—Make wildlife sculptures from tumbleweeds, sand, or snow. Paint the finished sculpture with dilute tempera in a spray bottle or with spray paint. Details can be added with a paint brush or additional materials such as fabrics.

—Make spider web prints by spraying both sides of a web with quality white enamel spray paint. Carefully place a sheet of black construction paper against the web. Cut the support strands and display your web. For more activities and information on spiders, see May/June 1982 "Nature's Notebook" in *Kansas Wildlife*.

—Construct wildlife models from paper or fabric scraps and paper towel or bathroom tissue tubes. Glue the tubes to form the animal's body and use magic markers, buttons, or pipe cleaners to add details.



—After a hike around the school grounds, make a chart of what the children saw and senses they used. An example would be:

TOUCH	ROCK, BARK, SOIL
SMELL	FLOWER, SOIL, LEAF
HEAR	DOG, BIRD, CAR, WIND
SEE	TREE, GRASS, SKY, CLOUD

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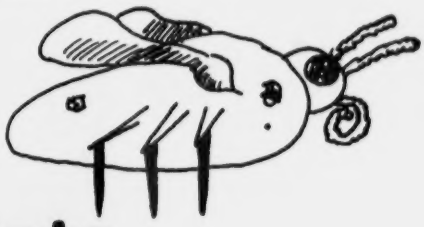
wildlife education service
KANSAS FISH AND GAME

—Children have read about animals and what they eat. Have them use their knowledge to build a "potato animal" with the anatomy needed by that particular species to feed. In addition to the raw potato torso, use toothpicks, pipe cleaners, etc.



Industrial Arts

You can attract wildlife to your home and school yard if you provide habitat. Here are some easy-to-construct feeders that will bring enjoyment during the winter.

—Make bird feeders from dried grapefruit rinds or coconut shell halves. Hang them from a branch with string. Fill with seed.

—Hang sunflower heads or thistles from branches. Set aside a plot at home or in the schoolyard to grow them.

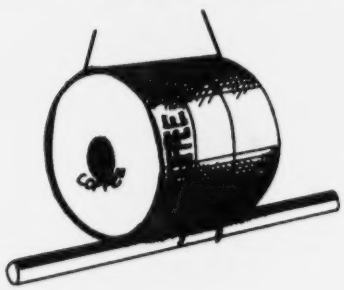
—String popcorn, peanuts and cranberries and drape around a tree.

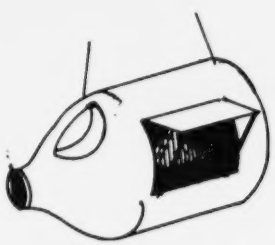
—Press peanut butter into a pine cone and roll the cone in a mixture of bird seed. Hang with string from a tree branch.

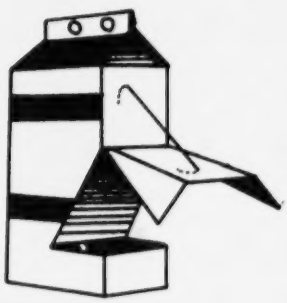
—Make a feeder for small birds with a coffee can, wire, and a dowel or branch. Cut out the bottom of the can. Carefully cut out two 2-inch holes in the center of two plastic lids. Put the lids on the can. Hang the feeder horizontally by running wire through small holes in the lids and through the can. Attach a stick or dowel as a perch.

—Recycle detergent and bleach bottles to make feeders. Thoroughly clean the containers. Hang the detergent bottles vertically after cutting two circles the size of a 50-cent piece in their middles on each side. Slide a perch through nail holes below the opening. To make a horizontal feeder from a bleach bottle, cut 6-inch long and 4-inch wide flaps in the side of the bottle. Prop these open with a twig. Attach a dowel or twig perch and hang with wire.

—Use a half-gallon milk carton for a feeder. Cut out an opening for feed about 1¼ inches deep. Hold up the roof with a straightened paper clip inserted in the side of the carton and the roof. Bend the clip to hold the roof in place. Reseal the carton with a stapler and hang with a wire, or set feeder on a windowsill. Small holes can be made in the bottom of the feeder to let rainwater out.







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—Suet feeders are easy to make from an old onion bag or nylon net. Open the bag and fill it with suet (animal fat) from the grocery or meat market. Tie the bag shut and hang from a tree branch.

- Build a log feeder from a dead branch about 15 inches long and 3 inches thick. Nail bottle caps onto it. Attach an eye bolt into the top of the log to hang the feeder vertically. Fill the caps with a peanut butter-bird seed mixture. An alternate method is to drill holes in the log and fill them with a mixture of bird seed, peanut butter, and ground suet.

—Two aluminum pie pans can be combined with one 8- to 10-inch dowel and two jar lids to make a feeder. Place a metal jar lid in the center of a large aluminum pan and another inside a smaller pan. These lids will add weight and support to the feeder. Nail one end of the dowel to the small pan and lid arrangement. Attach the top of the feeder (large pan and lid) to the other end of the dowel with a nail or eye bolt.

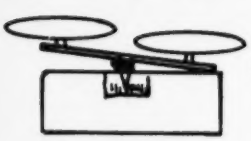
It is very important to continue feeding birds once you begin in the winter. The birds will learn to depend on you for food until they can find other sources of food in the spring. If you stop feeding during the cold weather, the birds may suffer.

Keep a record of the birds you see and their behavior. What are the different birds' favorite foods? Have the class bring in leftover bread crusts, oatmeal, corn, unsugared cereals, etc. to fill the feeders. Most meat markets will give suet away or sell it inexpensively. Ground suet is a good addition to the seed mixtures. The fat will help the birds withstand the winter cold.

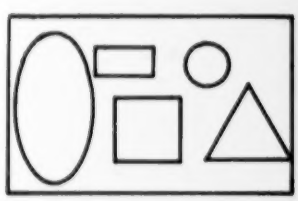
Mathematics

—As a review of *Food for Wildlife* and use of students' observational skills, ask your students the following questions: How many animals move by legs, by wings and legs, by fins? How many legs does each animal in *Food for Wildlife* have? How many of the animals were birds, mammals, insects, reptiles, amphibians, fish?

—If a badger eats 3 pocket gophers a day, how many would it eat in a week? In a month? In a year?

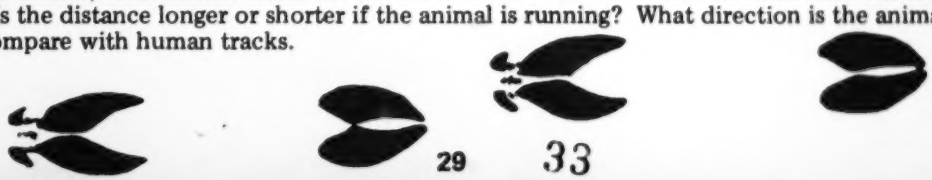


—An antelope and coyote were captured and weighed. The coyote weighed 14 kilograms. The antelope weighed 65 kilograms. What is the difference in their weights?



—Begin the study of geometry by discussing the shape of a triangle, square, rectangle, circle, and oval. Draw the shapes on separate cards or all 5 on one card. Ask the children to find things outside that are similar to each of the 5 shapes. Make a list of objects that resemble each shape.

—While on a hike, find animal tracks in the mud or snow. Measure the distance between tracks of an animal. Is the distance longer or shorter if the animal is running? What direction is the animal coming from? Compare with human tracks.



—Divide the class into teams to count vertebrates and invertebrates. Count the number of different invertebrates and vertebrates you find in a square foot of the schoolyard. Estimate the number living in a city block. Estimate the number living in an equivalent area of woodland or prairie. Compare the quantity and diversity between city, woodland and prairie plots.

Music

–There are many songs dealing with the environment or specific animals, such as "The Ants Go Marching." Find some other songs that deal with wildlife, or put a poem to music.

—Make a cassette tape of animal sounds. Bird songs are available through the Wildlife Reference Center. See if students can identify some common calls or songs. Tap out the rhythm of the animal sounds on your desk top or by clapping your hands.

—Have children listen to bird or other animal sounds. Then have them design an animal they think would make that sound. Later, identify the animal and compare the real animal with the imaginary.

—Write new wildlife-related lyrics to old songs.

—Some birds, such as the mockingbird, can imitate other birds. How well can you "mock" bird songs? Put words to the beat of bird songs and calls.

–Which animals would make good sopranos, altos, tenors, or basses? Listen to tapes, records, or the animals themselves while on a walk.

—Some animals makes specific calls, warning signals, or songs. Design instruments that sound like animals. Use wood, sandpaper, glue, construction paper, and odds and ends to create the sounds.

Social Studies

—Make a wildlife map from a large outline of the state and pictures of the animals found in *Food for Wildlife*. Have students place the animals where they are found in the state. What affects the distribution of wildlife? Discuss rainfall, temperatures, plant life, terrain, habitat types, and food preference. Compare Kansas with other states. This activity could lead to or enhance a study of the United States.

–Have your students list all things that they need to live. How does this list compare with that of wildlife? Which items overlap as needs of humans and wildlife? Can the children revise their list and do without some things? Stress food, water, and cover as the essentials for wildlife and humans. Try to differentiate between what we need to survive and which items are for a "better" standard of living.

—Students list the habitats they live in, such as home, school, etc. What is their favorite habitat? Their least favorite? Which habitat do they spend the most time in?

—Ask the children to observe and list the changes people have made to habitat. Discuss their lists and ask how they think each of the changes has affected wildlife. If they had control over the past, how would they have acted differently? If they could control the future, how would they plan to manage for people and wildlife to share the world.

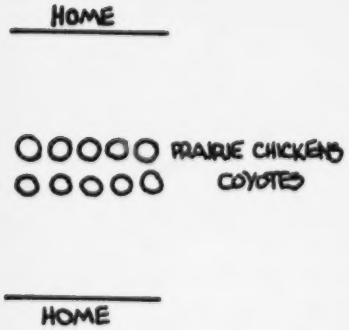
—Gather about 10 common natural objects, such as rocks, seeds, leaves, etc., and cover these with a cloth. Gather the children around you and tell them they'll have 30 seconds to take a good look at the 10 items which they'll need to remember. After looking, the children spread out to collect an identical set for themselves. Call them back in about 5 minutes to see how they've done. Pull out each item, one at a time, talking about it and seeing if they have one, too. Are any of these items used as food for wildlife?

Some of the food eaten by wildlife is also eaten by people. What can people do to save some food for wildlife? Examples of answers would be: Leave some crops standing in the field for wildlife, don't mow along fencerows and roadside ditches, and set up and maintain bird feeders.

—People use natural resources at a fast rate. Recommend to your students that they recycle and conserve natural resources as much as possible. Organize a paper or aluminum recycling project for your school or district.

—Learn more about the seasons by keeping a record of changes throughout the year. Have the class pick a special spot on the schoolgrounds, or allow each child his or her own location. Observe the changes that take place through the year. How do shadows change with the time of day and season?

Physical Education



—Review what you've learned about wildlife and get some exercise by playing "Prairie Chickens and Coyotes." Divide the class into two equal teams. One group is The Prairie Chickens; the other is The Coyotes. The teams line up facing each other about 3 feet apart. Home territory is marked with a line 15 feet behind each team. The group leader or teacher makes a statement such as, "Wildlife needs water, food and cover to live." If the statement is true, the Coyotes chase the Prairie Chickens, trying to catch them before they reach their home territory. If the statement is false, the Prairie Chickens chase the Coyotes. Any players who are caught become members of the other team. Some questions might cause confusion. The leader should stay quiet until after the commotion has ended and then discuss the answer with the group. Sample questions might include: "Rabbits are plant-eaters." (T) "A carnivore eats plants." (F)

—When students are playing or running on the playground, have them pick up litter. Their ticket to get back inside is four pieces of litter.

—Play porcupine tag. The porcupine is "it" and can move easily while the other players are required to hold one leg and hop. They can be tagged by the porcupine if they let go of their leg. If caught, they become the porcupine.

—Play "Prairie Rattlers." The group forms a circle around two blindfolded members, making a "snake pit." The blindfolded players are the prairie rattlers. Their rattles are tin cans with stones in them. One snake is the pursuer, who has 5 shakes of the rattle to find and touch the pursued. The pursued must respond immediately after each shake from the pursuer. The pursued can shake as often as he/she dares. The players forming the snake pit keep track of the rattles and cheer. The snake pit may change in size and shape to add variety.

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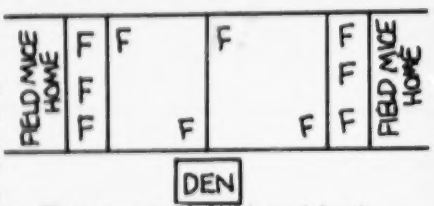
—Take a blind trust walk. Students work with partners, each having a chance to be blindfolded. While "blind" they are **carefully** led to explore surrounding areas using their other senses. The leader may have the blindfolded person experience touching a feather or tree bark, smelling the soil, listening to the wind, etc. A group can be led together by having participants hang onto a rope throughout the course. Conclude the activity by seeing if the participants can retrace their steps when the blindfolds are removed.

—There are dances named after animals, such as the bunny hop and fox trot. Try creating your own animal dances. Begin by demonstrating and practicing the bunny hop and fox trot. Give each group of 5 children an animal dance name, such as Buffalo Bump, Squirrel Swing Step, Rattlesnake Rumba, Porcupine Polka, Turkey Two-Step, Catfish Crawl, or Turtle Tango. Each group performs their dance in front of the class using the music of their choice. Stress that students use creativity in developing their dance.

—Divide class into groups of approximately 5. Give each group an animal name. The group combines to form the animal. The rest of the class tries to guess what it is.

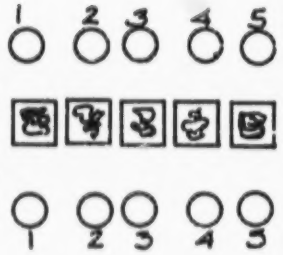
—Students can express animal behavior and movement by playing a passenger on Noah's Ark. Count the number of children present. Write a list of animals that is half the number of the children. Write each animal twice so that the players will have partners ("two by two"). If there is an odd number, have one group of three. Distribute the animal names at random in "closed ballot" form. The children now become the animal and act like it. They find their partner by observing the movements, sounds, and shapes of the other animals. No talking is allowed. When partners have found each other, they stand together quietly.

—Play "Nesting Red-Winged Blackbirds." Players are in groups of 3, except for one person who is the caller. Two of the group hold hands and form a cattail nest. The third player is a red-winged blackbird who stands inside the nest. When the caller says, "Blackbirds find a new nest," the birds change locations and the caller tries to find a home. The un-nested bird becomes the new caller. After awhile, let the nests and bird players change roles.

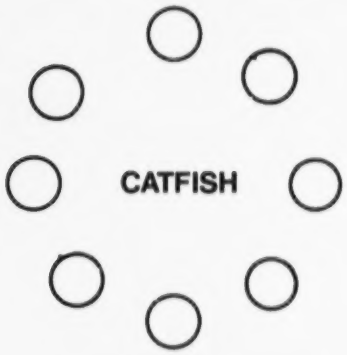


—Play "Fox and Field Mice." Ten children become foxes; others are field mice. They stand in the boundaries as shown in the diagram. Foxes may run from side to side but not out of their boundary line. The field mice line up at the starting line and try to make it to the finish line without being tagged by a fox. Up to four field mice run at one time. Field mice are safe at home or while standing on any line. They can walk back and forth on the lines waiting to escape. If caught, the field mice sit in the den. Start a new game when several field mice have made it safely home or when several are captured in the den. Have the field mice and foxes reverse roles.

—Review the animals in the booklet while exercising. Make several copies of 5 to 7 animal pictures. Tape these on tag board and fasten them to the floor. Students form a circle around the pictures and hop, skip, walk, or run in the circle. When the instructor says "Stop" or claps his or her hands, everyone stops moving. The teacher calls out the name of one of the animals and the children try to find the animal and stand by the picture (one person per picture). The children who did not find a picture return to the circle and resume moving until another animal's name is called. The game is finished when all of the children are by a picture.



—The class forms two teams and counts off. The teams face each other with pictures of animals on a center line. The instructor says the name of one of the animals, then calls a number. The two children with that number run to the correct pictures, try to get it, and return to their places in line. The picture is replaced and play continues. The instructor keeps score. Add a challenge by having the player who does not reach the picture first attempt to tag the other player before he or she returns to home base. If the player is not tagged, the team gains two points; if tagged, one point.



—Play "Catfish and Bluegill" by choosing one person as the catfish. The others are bluegills. The bluegills form a circle around the catfish. The bluegills have home base lines on either side of the circle. When instructed, the bluegills skip or hop around the circle. The catfish may jump out at any time and tag a bluegill. Any bluegills that are tagged before they reach home become catfish. Play continues until all of the bluegills are gone.

—Play "Producers-Consumers." Two people are the "sun." The remainder of the class are "producers" or "consumers." (Have about 1 consumer to every 2 producers.) The sun players have a handful of marbles. They are attempting to reach the producers without being tagged by a consumer. If tagged, they give up one marble to the consumer and continue on their way. The producers are also trying to reach the sun(s) to gain energy and to avoid being tagged by a consumer. If tagged, the producer stands still. At the end of play, see how many marbles the producers and consumers have. Discuss what happens when there are more consumers than producers.

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Notes:

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Resources and References

etc... ...Appendix

Locate the Department of Wildlife and Parks office closest to you. The office personnel may be able to help you, and most offices have free informational brochures.

Pratt Headquarters
Kansas Department of Wildlife and Parks
RR 2, Box 54A
Pratt, Kansas 67124
316/672-5911

NC Regional Wildlife and Parks Office
511 Cedar, Box 489
Concordia, Kansas 66901
913/243-3857

Downs District Office
Highway 24E
Downs, Kansas 67437
913/454-6315

NE Regional Wildlife and Parks Office
3300 SW 29th
Topeka, Kansas 66614
913/273-6740

Blue Rapids District Office
801 S. Main
Blue Rapids, Kansas 66411
913/226-7509

Kansas City District Office
Clover Leaf Bldg. 1, Suite 221
6811 W. 63
Shawnee Mission, Kansas 66202-4080
913/722-6024

Manhattan District Office
Rt. 6
Manhattan, Kansas 66502
913/539-9479

Osage District Office
Osage State Fishing Lake
Box 303
Carbondale, Kansas 66414
913/665-7341

NW Regional Wildlife and Parks Office
Route 2
Hays, Kansas 67601
913/628-8614

Colby District Office
190 Franklin, Box 366
Colby, Kansas 67701
913/462-3367

SC Regional Wildlife and Parks Office
8420 N. Broadway, Box 317
Valley Center, Kansas 67147
316/755-2711

El Dorado District Office
Walnut Valley Bank Bldg., Box 129
El Dorado, Kansas 67042
316/321-9399

Emporia Wildlife Investigation Office
1830 E. Merchant
Emporia, Kansas 66801
316/342-0658

Fall River District Office
Rt. 1, Box 85
Severy, Kansas 67137
316/583-6783

Winfield District Office
Winfield State Hospital
Winfield, Kansas 67156
316/221-1200 ext. 275

SE Regional Wildlife and Parks Office
222 W. Main Building, Suite C & D
Chanute, Kansas 66720
316/431-0380

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SW Regional Wildlife and Parks Office
808 Highway 56
Dodge City, Kansas 67801
316/227-8609

Independence District Office
Park Authority Bldg., Elk City Reservoir
Box 945
Independence, Kansas 67301
316/331-6820

New Strawn District Office
Box 103
New Strawn, Kansas 66839
316/364-2282

Pittsburg Distict Office
Route 2, Box 372 AAA
Pittsburg, Kansas 66762
316/231-3173

Mound City District Office
Courthouse
Mound City, Kansas 66056
913/795-2218

Cheyenne Bottoms Waterfowl Mgmt. Area
Route 3
Great Bend, Kansas 67530
316/793-7730

Garden City District Office
South Star Route
Garden City, Kansas 67846
316/276-8886

KANSAS WILDLIFE Magazine
A bi-monthly publication
available from the
Pratt headquarters.
$6.00 - 1-year subscription
$11.00 - 2-year subscription
$15.00 - 3-year subscription
(Prices subject to change.)

There are several other excellent sources of information on environmental topics available in Kansas and nationally. The organizations provide materials, speakers, or services on environmental education. This list is not complete. Make additions where appropriate.

Kansas Organizations

American Camping Association
Missouri Valley Section
4201 W. 15th Street
Topeka, Kansas 66604

Dillon Outdoor Education Center
3002 East 30th
Hutchinson, Kansas 67501

Environmental Education Curriculum Materials Center
Education Division
Farrell Library, Kansas State University
Manhattan, Kansas 66502

Great Bend Zoo
City Park
Great Bend, Kansas 67530

Kansas Academy of Science
Department of Biology
Emporia State University
Emporia, Kansas 66802

Kansas Advisory Council for Environmental Education
(Contact the State Department of Education
Science coordinator, or State and Extension
Forestry for information.)

Kansas Association of Conservation Districts
Route 1, Box 32
McPherson, Kansas 67460

Kansas Bass Chapter Federation
(Write to Kansas Department of Wildlife and Parks
RR 2, Box 54A, Pratt, Kansas 67124
Fisheries Division for address of
current Youth Director.)

Kansas Canoe Association
2319 Terry Way
Manhattan, Kansas 66502

Kansas Energy Office
214 W. 6th
Topeka, Kansas 66603

Kansas Geologic Survey
1930 Avenue A, Campus West
University of Kansas
Lawrence, Kansas 66044

Kansas Herpetological Society
Museum of Natural History
University of Kansas
Lawrence, Kansas 66045

Kansas Ornithological Society
Department of Biological Sciences
Fort Hays State University
Hays, Kansas 67601

Kansas Outdoors Unlimited
P. O. Box 470
Herington, Kansas 67449

The Kansas School Naturalist
Emporia State University
Division of Biological Sciences
Emporia, Kansas 66801

Kansas Water Office
Suite 503, Kansas Avenue
Topeka, Kansas 66603

Kansas Wildflower Society
c/o Washburn University
Mulvane Art Center
Topeka, Kansas 66621

Kansas Wildlife Federation
P. O. Box 720
Junction City, Kansas 66441

Lee Richardson Zoo
Finnup Park
Garden City, Kansas 67846

Museum of Natural History
University of Kansas
Lawrence, Kansas 66045

Sedgwick County Department of Environmental Resources
Historic County Courthouse
510 N. Main Street
Wichita, Kansas 67203

Sedgwick County Zoo
5555 Zoo Boulevard
Wichita, Kansas 67212

Soil Conservation Service
USDA
P. O. Box 600
Salina, Kansas 67401

State Biological Survey
2045 Avenue A, Campus West
Lawrence, Kansas 66044

State Conservation Commission
Room 1014, 535 Kansas Avenue
Topeka, Kansas 66603

State Department of Education,
Science, Math & Environmental Education
120 East 10th Street
Topeka, Kansas 66612

State Department of Health & Environment
Forbes Field, Building 740
Topeka, Kansas 66620

State Extension Services
Kansas State University
Umberger Hall
Manhattan, Kansas 66506

State and Extension Forestry
Kansas State University
2610 Claflin Road
Manhattan, Kansas 66502

State Park & Resources Authority
503 Kansas Avenue
P. O. Box 977
Topeka, Kansas 66601

Topeka Zoological Park
635 Gage Boulevard
Topeka, Kansas 66606

Wildlife Society Kansas Chapter
(Contact Kansas Department of Wildlife and Parks
RR 2, Box 54A, Pratt, Kansas 67124
for current president's address)

National Organizations

American Fisheries Society
5410 Grosvenor Lane
Bethesda, MD 20814

American Fishing Tackle Manufacturers Association
20 N. Wacker Drive
Chicago, IL 60606

American Forest Institute
1619 Massachusetts Avenue, N.W.
Washington, D. C. 20036

Boy Scouts of America
National Office
1325 Walnut Hill Lane
Irving, Texas 75062

Bureau of Land Management
U. S. Department of Interior
Washington, D. C. 20240

Center for Action on Endangered Species
175 West Main Street
Ayer, Massachusetts 01432

Center for Environmental Education
625 Ninth Street, N.W.
Washington, D. C. 20001

Ducks Unlimited, Inc.
P. O. Box 66300
Chicago, Illinois 60666

DU Kansas Regional Office
1004 West Ninth
Pratt, Kansas 67124
(check local chapter)

Environmental Protection Agency
401 M Street, S.W.
Washington, D. C. 20460

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ERIC Clearinghouse for Science, Mathematics,
and Environmental Education
The Ohio State University
School of Natural Resources
1200 Chambers Road, 3rd Floor
Columbus, Ohio 43212

Forest Service
U. S. Department of Agriculture
P. O. Box 2417
Washington, D. C. 20013

The Garden Club of America
598 Madison Avenue
New York, New York 10022
(check local group)

Girl Scouts of the U.S.A.
830 Third Avenue
New York, New York 10022
(check local group)

Izaak Walton League of America
1800 North Kent Street, Suite 806
Arlington, Virginia 22209
(check local group)

National Association of Biology Teachers
11250 Roger Bacon Drive
Reston, Virginia 22090

Kansas Association of Biology Teachers
(Contact State Department of Education
Science Coordinator for current address.)

National Association for Environmental Education
P. O. Box 400
Troy, Ohio 45373

National Audubon Society
950 Third Avenue
New York, New York 10022

Kansas Regional Office
813 Juniper Drive
Manhattan, Kansas 66502
(check local group)

National Park Service
U. S. Department of Interior
Interior Building
Washington, D. C. 20240

National Science Teachers Association
1742 Connecticut Avenue, N.W.
Washington, D. C. 20009

State Chapter
Kansas Association of Teachers of Science
Contact: State Dept. of Education
Science Coordinator for information

National Shooting Sports Foundation
1075 Post Road
Riverside, Connecticut 06878

National Wild Turkey Federation
Wild Turkey Bldg., P.O. Box 530
Edgefield, South Carolina 29824

National Wildlife Federation
1412 16th Street, N.W.
Washington, D. C. 20036

The Nature Conservancy
Suite 800, 1800 N. Kent Street
Arlington, Virginia 22209

Natural Science for Youth Foundation
763 Silvermine Road
New Canaan, Connecticut 06840

Quail Unlimited
P.O. Box 10041
Augusta, Georgia 30906

Safari Club International
5151 E. Broadway, Suite 1680
Tucson, Arizona 85711

Sierra Club
530 Bush Street
San Francisco, California 94108
(check for local group)

Smithsonian Institution
1000 Jefferson Drive, S.W.
Washington, D. C. 20560

Soil Conservation Service
U. S. Department of Agriculture
P. O. Box 2890
Washington, D. C. 20013

Sport Fishing Institute
Suite 503
719 13th Street, N.W.
Washington, D. C. 20005

U. S. Fish and Wildlife Service
Department of the Interior
Washington, D. C. 20240

The Wilderness Society
1901 Pennsylvania Avenue, N.W.
Washington, D. C. 20006

Wildlife Management Institute
709 Wire Building
1000 Vermont Avenue, N.W.
Washington, D. C. 20005

The Wildlife Society
5410 Grosvenor Lane
Bethesda, Maryland 20814

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Glossary

Many of the terms below have been defined in the curriculum material. Check an ecology or biology book for further definitions and information. Definitions are taken from context of use in texts and the following sources:

Multidisciplinary Wildlife Teaching Activities, by William R. Hernbrode; *Project Learning Tree*, by the American Forest Institute, Inc.; and *The Random House Dictionary of the English Language, College Edition.*

ACRE—A unit of land equal to 43,560 square feet or 1/640 square mile.

ADAPT—To make suitable to environmental conditions; adjust.

AMPHIBIAN—Cold-blooded vertebrates that are covered with moist skin and live partially in an aquatic habitat and partially on dry land. This group includes frogs, toads, and salamanders.

ANNUAL TURNOVER—The rate of replacement of individual animals in a population. Bobwhite quail may have a 70 percent annual turnover. Only 30 percent of the birds alive at the beginning of the year are alive at the end of the year.

ANTLER—Bone-like growth on members of the deer family that falls off and grows back each year. Horns differ from antlers because they do not fall off each year. A few horned animals drop the outside sheath of the horn (such as antelope).

AQUATIC—Living or growing in water.

ARACHNID—Any arthropod in the class *Arachnida*. Includes spiders, scorpions, mites, ticks, etc.

BAG LIMIT—The number allowed to be harvested in regulated hunting and fishing. A hunter may remove four pheasants each day. This is a bag limit.

BIG GAME—Large, hunted animals, such as antelope and deer. Examples of small game are rabbits, squirrels, pheasants, quail, etc.

BIOME—A complex of communities characterized by a distinctive type of vegetation and maintained under the climatic conditions of the region.

BIOTIC COMMUNITY—The living organisms in a community. Includes all plants and animals in the community. The non-living parts would be the abiotic parts of the community.

BLIND—A hiding place for observing or photographing.

BOOMING GROUND—An area in the prairie used by prairie chickens for their mating dance. The male birds make a booming sound while they dance to attract females.

BOTTOMLAND—Low-lying land, usually near a river.

BOUNTY—An old practice of paying for removing certain animals. This was thought to be useful in reducing pest animals but proved to be impractical.

BROWSE—This word can be a noun or verb. Brushy vegetation used by animals as food (noun). To eat the twigs and leaves of woody, brushy plants (verb). Deer, elk, and moose are browsers.

BRUSH PILE—Branches and other vegetation piled together for wildlife cover.

BURROW—A hole or tunnel in the ground made by a small animal for habitation and refuge.

CAMOUFLAGE—Color and/or pattern that blend into the environment.

CARNIVORE—Meat eater.

CARRION—Dead animals in the process of decaying. Crows feed on carrion.

CARRYING CAPACITY—The number of animals of a species that can be supported in a particular habitat at any given time. This number will change with the season, and from year to year. It depends on competition from other animals, rainfall, and other weather factors.

CHANNELIZATION—Changes made to a river bed to straighten, widen, or deepen it. Used in land reclamation, and mistakenly used in flood control attempts but is very harmful to the river habitat.

CLASSIFICATION—The assignment of plants and animals to groups within a system of categories distinguished by structure, origin, etc.

CLEARCUT—A logging practice that removes all the trees in an area.

COLD-BLOODED—Describes animals that change body temperature to match their surroundings.

COMMUNITY—A group of plants and animals living in a particular location and interacting with each other.

COMPETITION—Struggle among organisms for food, space, cover, and other requirements for existence.

CONSERVATION—The wise use of natural resources to assure their presence in the future.

CONSUMER—Uses plants or animals as food. Eats producers. A primary consumer, such as a rabbit, eats plants. A secondary consumer, such as a fox, eats primary consumers.

COVER—Shelter provided by vegetation, debris, and irregularities of the land. Used by wildlife for sleeping, hiding, feeding, and breeding areas.

COVEY—A small flock or group. Quail are often found in a covey.

CRITICAL HABITAT—Includes the areas of land, water, and air space occupied by an endangered species at the time this species is listed. This habitat is classified by the federal government as being necessary for the species' survival.

CRUSTACEAN—Any chiefly aquatic arthropod of the class *Crustacea*. Usually has a hard shell or crust covering the body. Includes lobsters, shrimps, crabs, barnacles, etc.

DABBLING DUCKS—Ducks that live near shallow marshes, ponds, and rivers. They tip their tails up to feed, with the majority of their bodies above water. These ducks take off in vertical flight when startled. Also called "puddle ducks."

DECOMPOSER—Plants and animals that feed on dead material and cause it to mechanically or chemically break down. Examples include bacteria, fungi, and earthworms.

DEN—A secluded place, as the lair of a predatory animal.

DINGELL-JOHNSON FEDERAL AID IN FISHERIES RESTORATION ACT—D-J funds provide federal cost shares for fisheries projects. Funds provided by an excise tax on some fishing equipment.

DIURNAL—Active during the day. Opposite of nocturnal.

DIVING DUCKS—Ducks that prefer deep water as in lakes and bays. They feed by diving below the surface and take flight from a running start.

DOMESTIC ANIMALS—Animals of the home or farm, such as dogs, cats, chickens, etc.

ECOLOGY—The scientific study of the relations of living things to one another. A scientist who studies these relationships is called an ecologist.

ECOSYSTEM—A system formed by the interaction of a community of organisms with each other and their nonliving environment.

EDGE EFFECT—The tendency of wildlife to concentrate at the edges of two adjacent vegetative or land use types. The combination of habitats provides extra food and shelter.

ENDANGERED—Species that are in danger of becoming extinct throughout all or a significant portion of their range.

ENVIRONMENT—The total of all surroundings including air, water, plant life, people, and wildlife. Physical and biological factors included.

ESTIVATE (Aestivate)—To spend the summer in a torpid, or dormant, condition.

EXOTIC—In conservation terminology, this refers to a foreign plant or animal that has been introduced into a new area. The ring-necked pheasant is an exotic introduced to the U. S. from Asia.

EXTINCT—Species that no longer exist. Examples include passenger pigeon, great auk, and the sea mink.

EXTIRPATED—Describes species that were removed in a particular area but are found elsewhere. Mountain plover were extirpated from Kansas and have only recently been reintroduced.

FENCEROW—Vegetation growing along a fence. Often used by wildlife for cover.

FISH AND GAME COMMISSION—Organization that has responsibility for the wildlife and habitat in the state. Each of the 50 states has a similar organization.

FLYWAY—Flight routes used by migratory birds. Kansas is in the Central Flyway.

FOOD CHAIN—The sequence by which energy is passed from sun to plants to animals. A green plant is eaten by an insect that is eaten by a bird, forming a simple food chain.

FOOD WEB—An interconnection of food chains.

FORAGE—Used as a verb and a noun. Refers to vegetation taken by herbivores (noun). Act of taking the vegetation (verb).

FORBS—For wildlife use, forbs are weeds and herbs, low-growing annual or perennial herbaceous plants.

GAME—Animals that can legally be hunted, fished, or trapped.

GENUS—Used in plant and animal classification as the subdivision of families or subfamilies. A genus usually has more than one species. The genus *Canis* includes dogs, wolves, coyotes, etc.

GRANIVORE—Grain eater.

HABITAT—The place in which an animal lives. It must include food, water, and cover. This involves escape cover, winter cover, cover to rear young, and space to play. Loss of habitat is the biggest single threat to wildlife.

HARE—Rodent-like mammals of the genus *Lepus* having long ears, a divided upper lip, and long hind limbs adapted for leaping. Distinguished from rabbits by having young that leave the nest in 24 to 48 hours. Hares are generally larger than rabbits. Jack rabbits are hares.

HERBIVORE—Plant eater.

HIBERNATE—Spending winter, or a portion of it, in a state of sleep; a torpid or resting state.

HUNT—To search for game animals for the purpose of catching or killing. Hunting is now regulated under comprehensive laws in every state. Sport hunting removes the surplus of wildlife as opposed to market hunting in pioneer days when nearly all edible or useful forms of wildlife were taken almost without restriction.

INTERACTION—The relationship of one organism to another. The action of one population affecting the growth or death rate of another population. One population may eat members of other populations, compete for food, etc. Interactions can be positive, negative, or neutral.

INTERDEPENDENCE—The interrelationships of wildlife with one another and with the various elements of their environment.

INTERSPERSION—Mixing of habitat types. Interspersion of habitat creates edge.

INVERTEBRATE—Animal without a backbone.

KINGDOM—A province of nature. The animal, vegetable, and mineral kingdoms.

LARVA—Immature, wingless, feeding stage of an insect that undergoes complete metamorphosis. Also, the young of any invertebrate.

LIFE CYCLE—The continuous sequence of changes undergone by organisms from one primary form to the development of the same form in a subsequent generation. Immature animals grow, reproduce, and leave more immature animals, defining the species' life cycle.

LIMITING FACTOR—Anything that controls the density of a population within its habitat. Factors include the quality and/or quantity of food, water, cover, predators, disease, and climate.

MAMMAL—Any vertebrate of the class *Mammalia* including humans. All members of this class have hair on their bodies and feed their young milk.

MARSH—A tract of low wetlands generally supporting cattails and other reeds, muskrats, mink, red-winged blackbirds, and a wide variety of other species.

MICROCLIMATE—The environmental conditions in a restricted area. A shady area of cottonwoods in the sunny prairie may create a microclimate.

MIGRATORY—Birds and other animals that make an annual trip to a different area. Distance may be long or short, depending on the species. Sandhill cranes migrate through Kansas on their way to Texas for the winter and Canada for the summer.

MIMICRY—The close external resemblance of an animal to another animal or its surrounding. Often serves as protection or concealment. Imitate; simulate.

MOLLUSK—Any invertebrate of the phylum *Mollusca* comprising the chitons, snails, bivalves, squids, octopuses, etc. Typically have a hard shell.

MOLT—To shed worn feathers or skin so they can be replaced, or to lose one seasonal coat so it can be replaced by another.

MONOCULTURE—Vegetation of a single species, generally even-aged. This situation allows for little wildlife diversity and is potentially dangerous because it is more susceptible to disease.

MORTALITY RATE—The relative frequency of death in a community.

MUTUALISM—A close association between two different species whereby each species gains some benefit.

NATALITY RATE—Rate of birth.

NATIVE SPECIES—An animal or plant indigenous to a particular region.

NATURAL SELECTION—Process resulting in the survival and perpetuation of only those forms of plant and animal life that are able to adapt to the environment.

NOCTURNAL—Active at night; opposite of diurnal.

NONGAME—Animals that are not hunted, fished, or trapped; this includes the threatened and endangered species, song birds, etc.

NONRENEWABLE RESOURCES—Resources, such as soil and minerals, which cannot be regenerated by themselves.

OMNIVORE—Animal that eats both plants and animals.

ORGANISM—A form of life composed of mutually dependent parts that maintain various vital processes; any form of plant or animal.

PARASITE—An animal or plant that lives on or in an organism of another species from whose body it obtains nourishment.

PESTICIDE—Chemical preparation used to control populations of organisms.

PHOTOSYNTHESIS—The process by which green plants convert carbon dioxide and water into simple sugar. Chlorophyll and sunlight are essential to the series of complex chemical reactions involved.

PHYLUM—The major subdivision of the animal kingdom, consisting of one or more related classes.

PITTMAN-ROBERTSON FEDERAL AID IN WILDLIFE RESTORATION ACT—Funds gathered from an excise tax on sporting arms and ammunition for wildlife management and research use. A cost-sharing program of the federal government with the states.

PLANKTON—Organisms (usually microscopic) suspended in aquatic habitat. Includes bacteria, algae, protozoans, rotifers, etc. Phytoplankton are the plant plankton; zooplankton are the animal species.

POLLUTION—Harmful substances deposited in the air, water, or land which lead to a state of impurity and, often, unhealthiness.

POPULATION—All the individuals of a particular species in a given area.

PREDATOR—An animal that hunts other animals for its food.

PRESCRIBED BURNING—Planned application of fire to a predetermined area. A technique used in wildlife management to gain regrowth of certain vegetation.

PREY—Animals that are hunted for food by other animals.

PRODUCER—Organisms eaten by consumers. Green plants are primary producers; they are able to make food from sunlight and organic substances.

PRONGHORN—The proper name for the American antelope, *Antilocapra americanus*. Not a true antelope; does not have true horns. Pronghorns belong to a family by themselves. They are not found outside of North America.

RANGE—(a) Home range: the geographic area in which an individual animal resides. (b) an area grazed by livestock and/or wildlife. (c) all lands including forest land that produce native forage, in contrast to land cultivated for agricultural crops or carrying a dense forest.

RAPTOR—Bird of prey, such as eagles, hawks, and owls. Predatory birds.

RECYCLING—The salvage and reprocessing of used materials, such as paper, glass, and aluminum.

REFORESTATION—The replanting of trees in forests that have been affected by cutting, fire, disease, etc.

REFUGE—A wildlife sanctuary. National wildlife refuges are located across the United States. Kirwin, Quivira, and Flint Hills NWR are in Kansas.

REINTRODUCTION OF SPECIES—A wildlife management technique in which a species is reintroduced into its historic range, replanted in areas where it was extirpated.

RENEWABLE RESOURCES—Resources, such as trees and wildlife, that renew themselves naturally.

REPTILE—Any cold-blooded, scaled vertebrate of the class *Reptilia*, including turtles, lizards, snakes, and crocodiles.

RESERVOIR—A place where water is collected and stored for use. Kansas has approximately 25 reservoirs, such as Cheney, Wilson, and Clinton.

RESIDENT WILDLIFE—Animals that are residents of a specific area on a year-round basis, as opposed to migratory.

RIPARIAN—Dwelling on the bank of a river or other body of water. Riparian habitat is situated along a river.

RIPRAP—A quantity of stone placed in water for fish cover, and to prevent bank erosion.

ROADSIDE DITCH—Areas bordering roads; can be excellent for wildlife habitat if they are left to grow and have diverse vegetation. Too often, these areas are mowed and their use to wildlife reduced or removed.

RODENT—A gnawing or nibbling mammal, including mice, squirrels, and rabbits. Animals in the order *Rodentia*.

SACS—The baglike structure in an animal or plant. The prairie chicken has orange sacs on the sides of its neck.

SCAVENGER—An animal that eats the dead remains and wastes of other animals and plants. Dermestid beetles are scavengers.

SEASON (OPEN SEASON)—In wildlife terminology, season refers to a time when hunting and fishing is permitted for a particular species. May be a few days or year-round.

SEDGE—A rush or grass-like plant growing in wet places; sawlike edge to blade of plant.

SHELTER—Cover; cover from elements for raising young, to travel in, for breeding, sleeping, etc. Varies by species.

SHELTERBELT—Rows of trees and shrubs generally on the north and west sides of farms, homes, or fields; protects from weather and provides wildlife habitat.

SKINK—Any of a family of small, smooth-scaled lizards.

SLOUGH—An inlet from a river; backwater; tide flat, a creek in a marsh.

SMALL GAME—A hunting term designating smaller hunted species, such as rabbits, squirrels, quail, etc. Compare with "big game."

SPECIES—A group of individuals that resemble one another and are able to breed among themselves but not able to breed with members of another species. A category of biological classification immediately below the genus or subgenus. Species is both singular and plural.

STEWARDSHIP—The concept of land responsibility--that we do not own land but are managers of the resource and responsible to future generations for the condition of the land when we leave it.

STRESS—Usually thought of as a physical factor that applies to detrimental pressure to an organism or population. A drought might stress an animal population possibly resulting in inhibited reproduction.

SUCCESSION—The orderly, gradual, and continuous replacement of one plant or animal by another. A bare field will gradually develop into a woodland if not disturbed by fire, mowing, etc.

SURPLUS—That quantity of wildlife above the carrying capacity. The surplus is removed by disease, starvation, hunting, or predation.

TALON—A claw from a bird of prey.

TERRITORY—An area defended by an animal against others of the same species. Used for breeding, feeding, or both. Wolves are territorial.

THREATENED—Species of plants and animals that are protected by law and are limited in number or range or both. May become endangered if reduction continues.

UNGULATE—A hoofed mammal.

UNITED STATES FISH AND WILDLIFE SERVICE—The federal organization responsible for wildlife on the national level. This organization sets standards and gives guidance to the state wildlife agencies.

UPLAND—The higher ground of a region; above the level where water flows. Upland game animals include prairie chicken, turkey, pheasant, quail, etc.

VERTEBRATES—Animals with backbones.

WARM-BLOODED—Animals that are able to maintain a fairly constant body temperature independent of their environments, as opposed to cold-blooded animals.

WATERFOWL--Water birds; usually ducks and geese but may be used in referring to shore birds and wading birds as well.

WILDFIRE—Any fire other than a controlled or prescribed burn occurring on wild land.

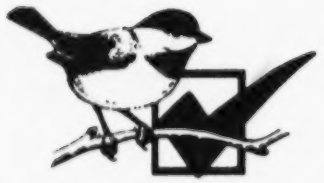
WILDERNESS AREA—An area established by the federal government to conserve its primeval character and influence for public enjoyment under primitive conditions in perpetuity.

WILDLIFE—All wild, living animals. Includes birds, fish, mammals, reptiles, amphibians, insects, mollusks, crustaceans, etc. Occasionally, the term is even applied to plants. Game and nongame animals are wildlife.

WILDLIFE MANAGEMENT—An effort based on the science of ecology and designed to maintain wildlife at certain population levels. This effort entails habitat manipulation and an understanding of wildlife population dynamics, diseases, behavior, and reproduction. This is done by wildlife managers working for the Fish and Game Commission and by other interested individuals and groups.

WILDLIFE RESEARCH—Investigating wildlife to gain information that can be used to better manage wildlife. Examples of projects might include taking a survey or census of populations, gathering and analyzing data about animal behavior, and studying and comparing the interaction of wildlife within habitats.

ZOOLOGY—The study of animals; a branch of biology.



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Food for Wildlife

KANSAS FISH AND GAME

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Comprehensive program written and developed by

JOYCE R. HARMON

Wildlife Education Coordinator

Illustrations by

Daisy Baughman and Alan Baccarella

**THIS MATERIAL IS DEDICATED TO THE CHILDREN OF KANSAS;
MAY THEY KNOW A LOVE OF WILDLIFE.**

The elementary series includes:

Preschool-Kindergarten	WILDLIFE IS BASIC
1st grade	WILDLIFE AND ME
2nd grade	FOOD FOR WILDLIFE
3rd grade	WILDLIFE NEEDS A PLACE TO LIVE
4th grade	ENDANGERED, OR ALIVE AND WELL LIVING IN KANSAS
5th grade	HOW DO WE GROUP WILDLIFE?
6th grade	HOME IS WHERE THE HABITAT IS

Wildlife Education Service
A series of wildlife education materials for Kansas youth
from the Kansas Fish & Game Commission

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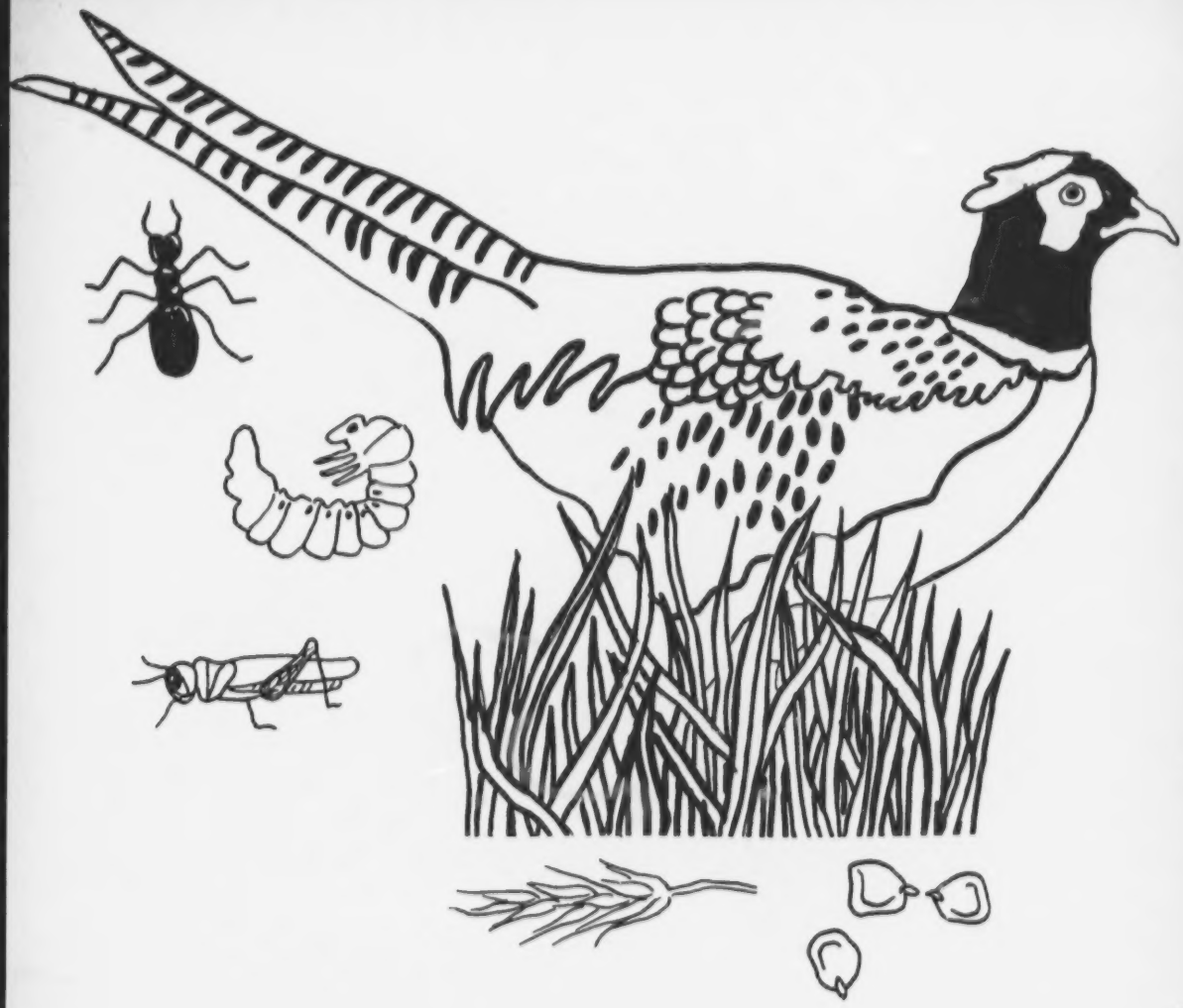
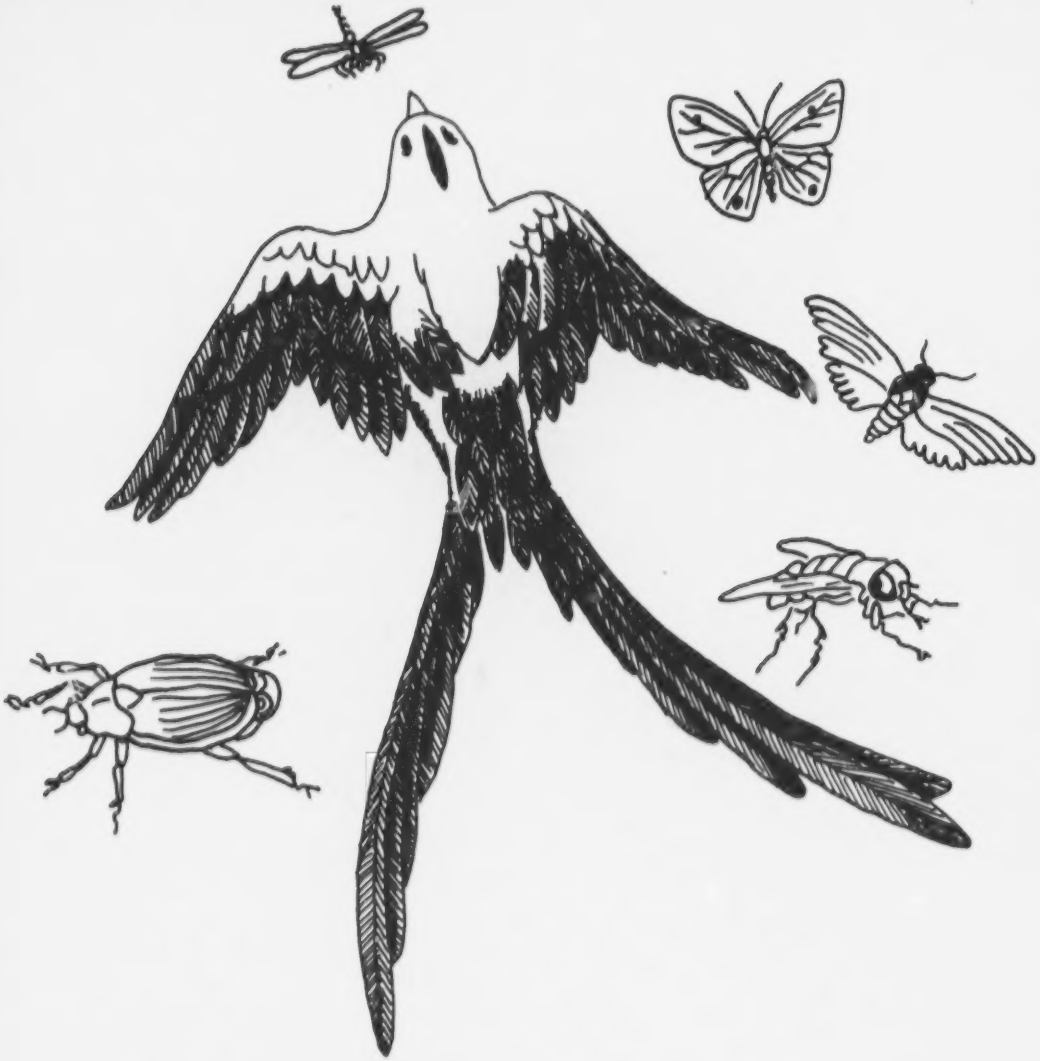
You get hungry, and so does Kansas wildlife. When you are hungry, you may eat many kinds of food.

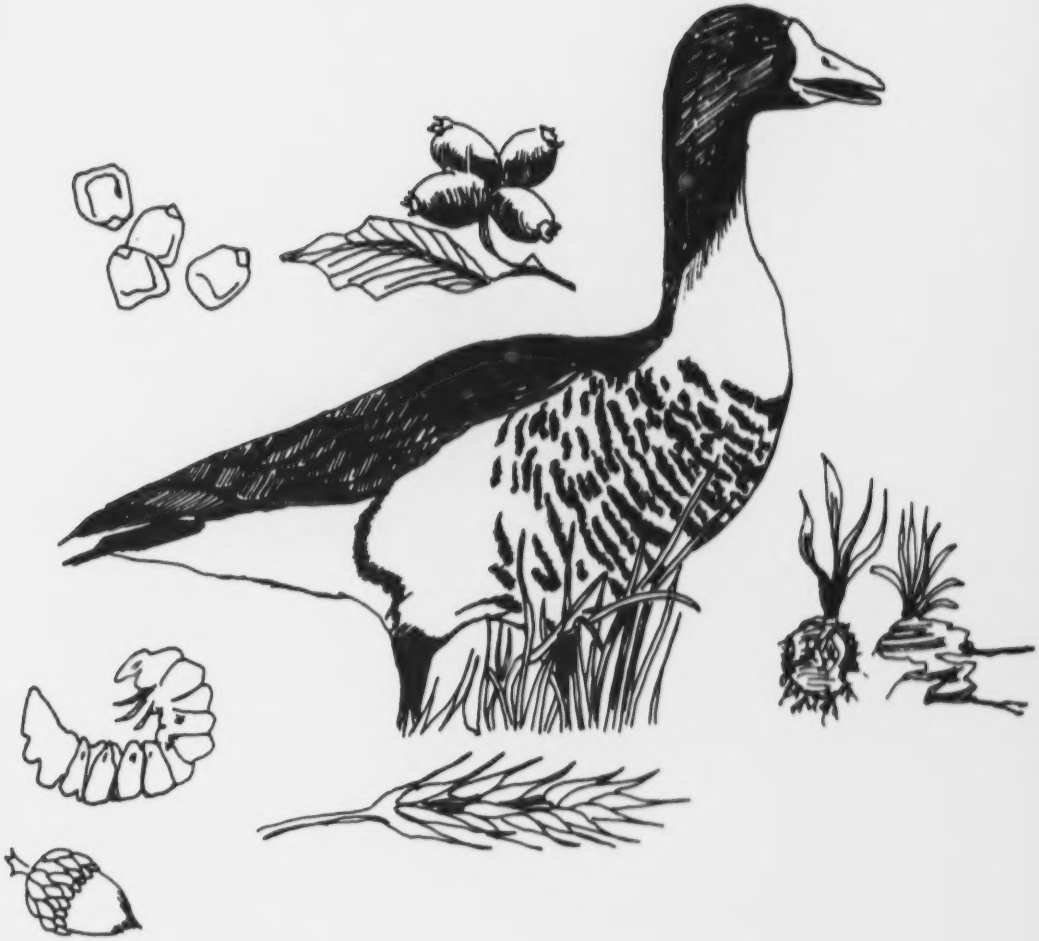
When animals are hungry, they eat different kinds of food, too. Let's look at a few Kansas animals and what they eat. We'll begin with the birds.



One of the many kinds of birds in Kansas is the **pheasant.** It was brought to the United States from Asia. Pheasants eat caterpillars, beetles, grasshoppers, crickets, ants, fly larvae, grain, and weed seeds that they find on the ground.

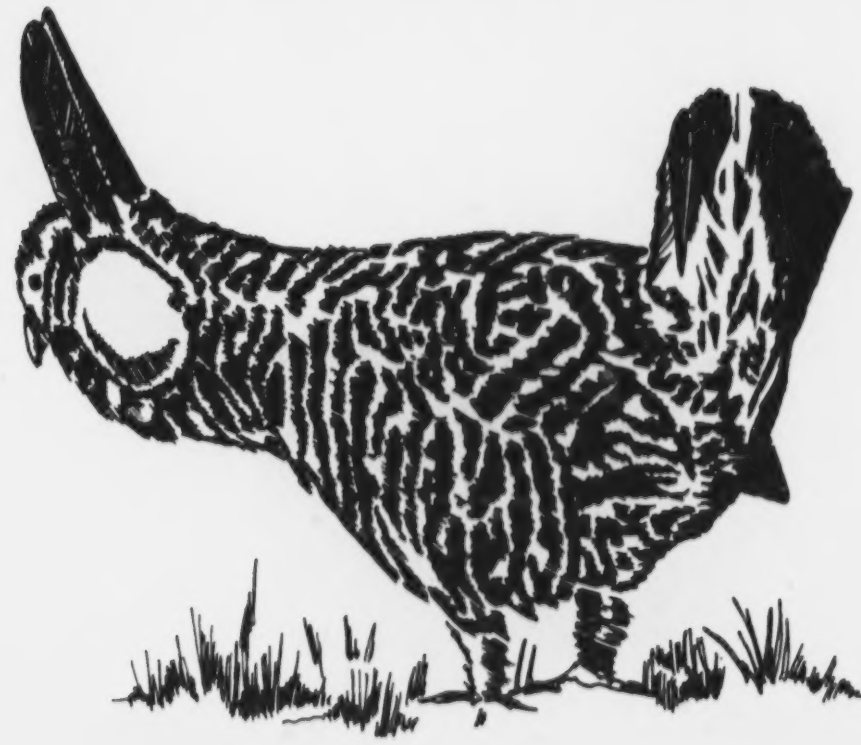


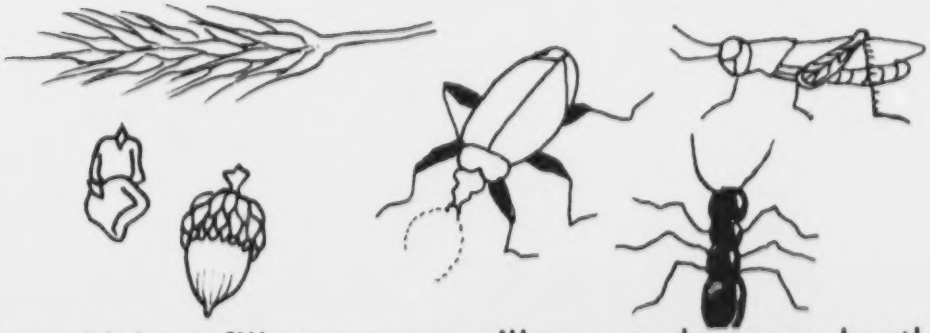
The **scissortail flycatcher** eats insects, too, but it catches them while it is flying. Can you tell how this bird got its name?



The **white-fronted goose** would rather eat vegetables like nuts, acorns, grain, berries, grasses, and roots. Can you tell why some people call this bird a "specklebelly"?

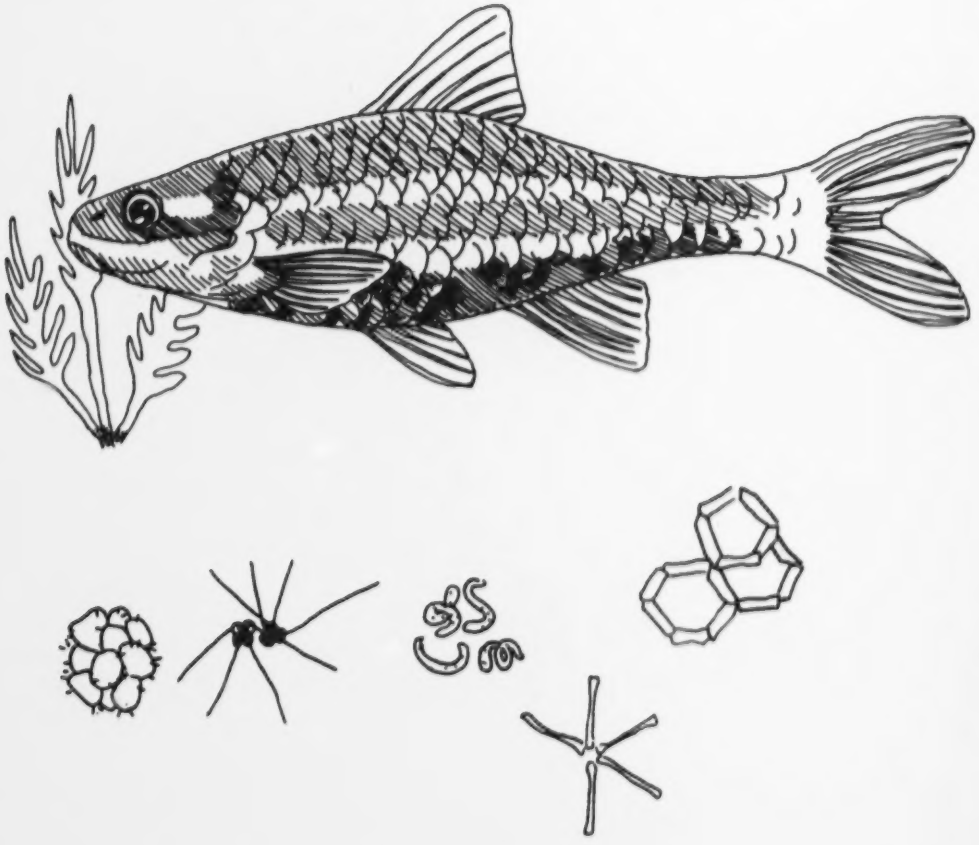
Some Kansas birds eat unusual things. Grasshoppers, scorpions, mice, lizards, and snakes better look out when a **burrowing owl** is around. Where do you think this bird makes its home?



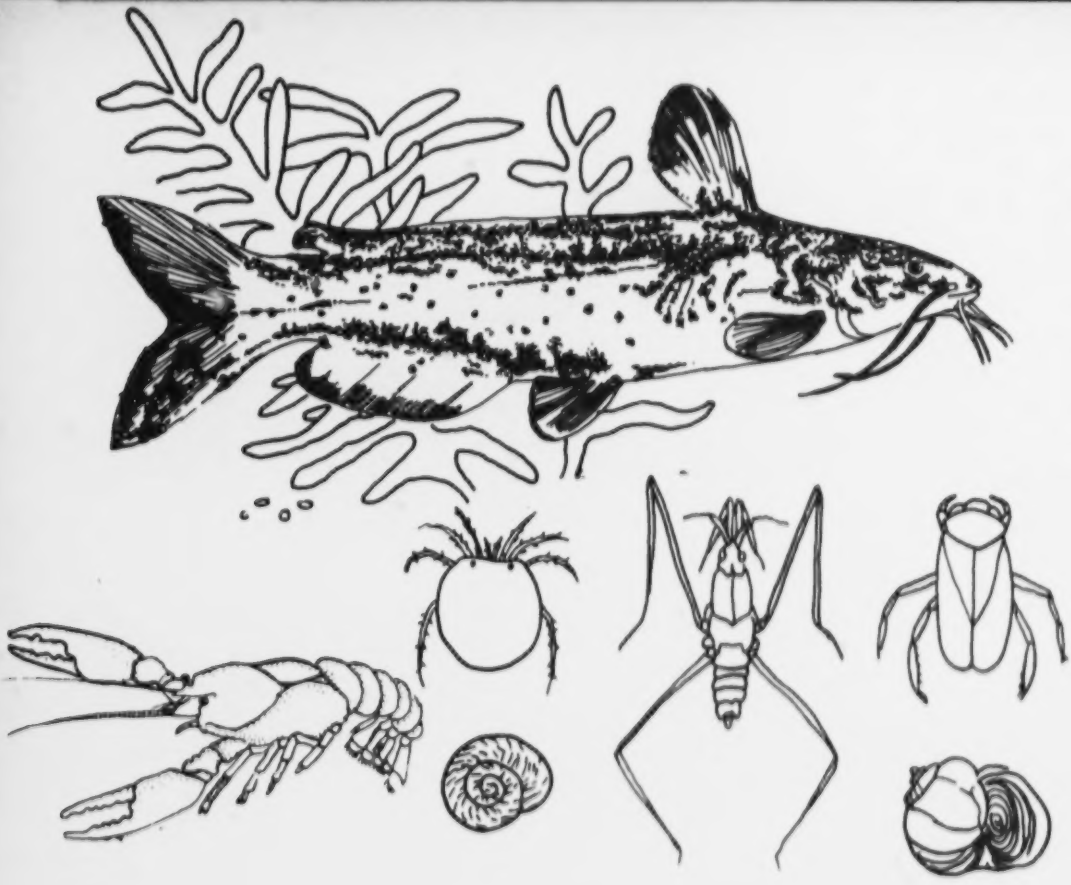


Prairie chickens fill up on caterpillars, grasshoppers, beetles, and berries in the summer. In winter, when the insects are gone, they eat grain and seeds. Kansas has more prairie chickens than any other state in the United States.

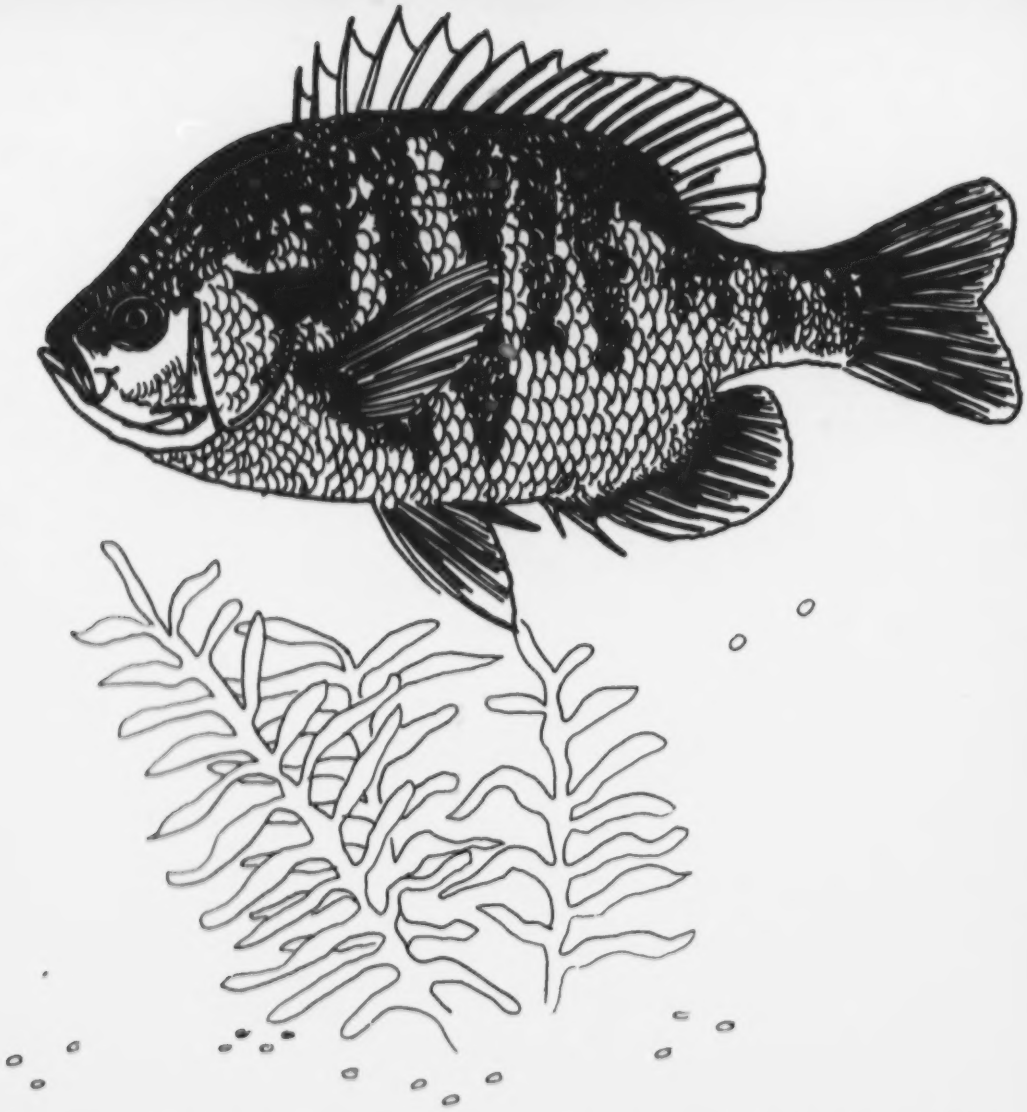
When the **pileated woodpecker** gets hungry, it hunts for ants and beetle larvae on trees. What does it use to help it find food?



Fishes are another type of animal. Even though they live in water, they eat many of the same things birds eat. One small fish, the **Topeka shiner**, eats very tiny underwater plants and animals.

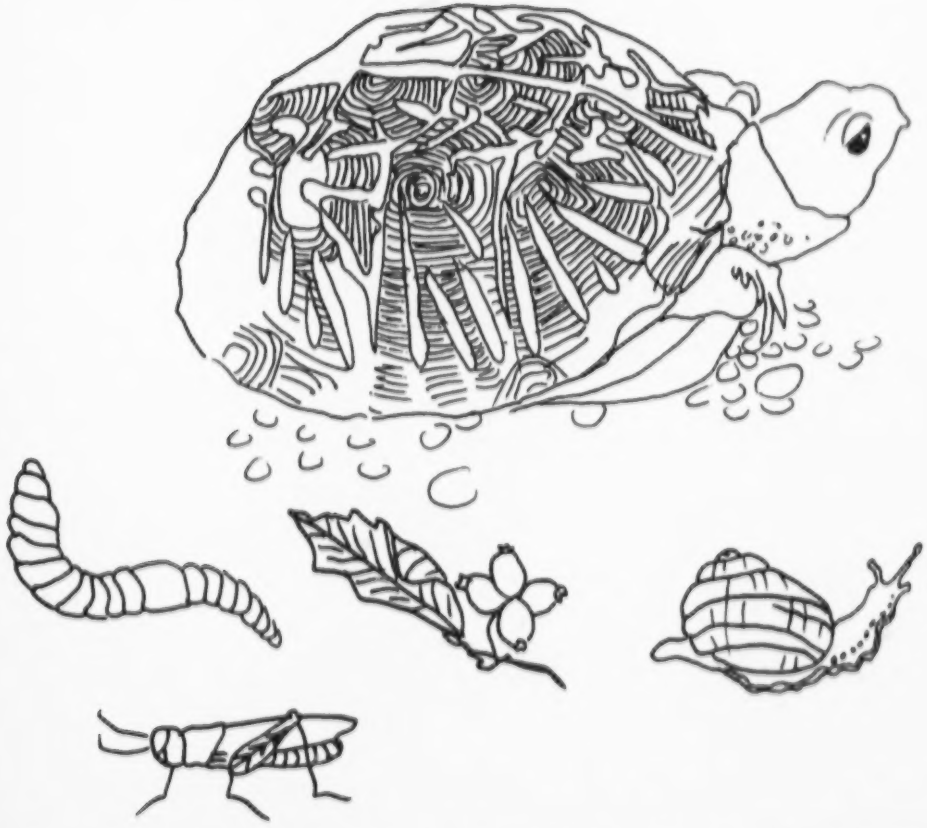


A bigger fish, the **channel catfish**, gobbles up insects, crayfish, mollusks, and other fish. They find living and dead animals with their sense of smell and taste. It smells with those long whiskers around its mouth. Do you suppose those whiskers have anything to do with the catfish's name?



Bluegills swim fast to catch insects and smaller fish for their dinner. They may even jump out of the water to catch insects on the water's surface. It's fun to catch bluegills when you're fishing.

There are more insects than any other animal. Some of them eat fish, some eat dead meat, and some eat other insects. But most eat grass and leaves. If you look carefully, there's probably a **grasshopper** like this one munching on grass in your yard.



Reptiles, like snakes and lizards, are animals with scales instead of fur, skin, or feathers. The **ornate box turtle** is a reptile with special large, hard scales called a shell. It eats plants and animals as it walks slowly across the land. Would you join it for a lunch of worms, snails, insects, and berries?

Salamanders, frogs, and toads are different from birds, fish, insects, and reptiles. They are amphibians and can live in the water and on land. The **plains leopard frog** catches beetles, grasshoppers, crickets, worms, and snails with its long, sticky tongue.

Like people, the **coyote** is a mammal. Mammals have hair and feed their young milk. Coyotes eat almost anything, including mice, rabbits, grasshoppers, and even watermelons.

A cousin of the coyote, the **swift fox**, also hunts for small mammals as well as insects, reptiles, amphibians, birds, and berries. Can you guess how it catches this food?

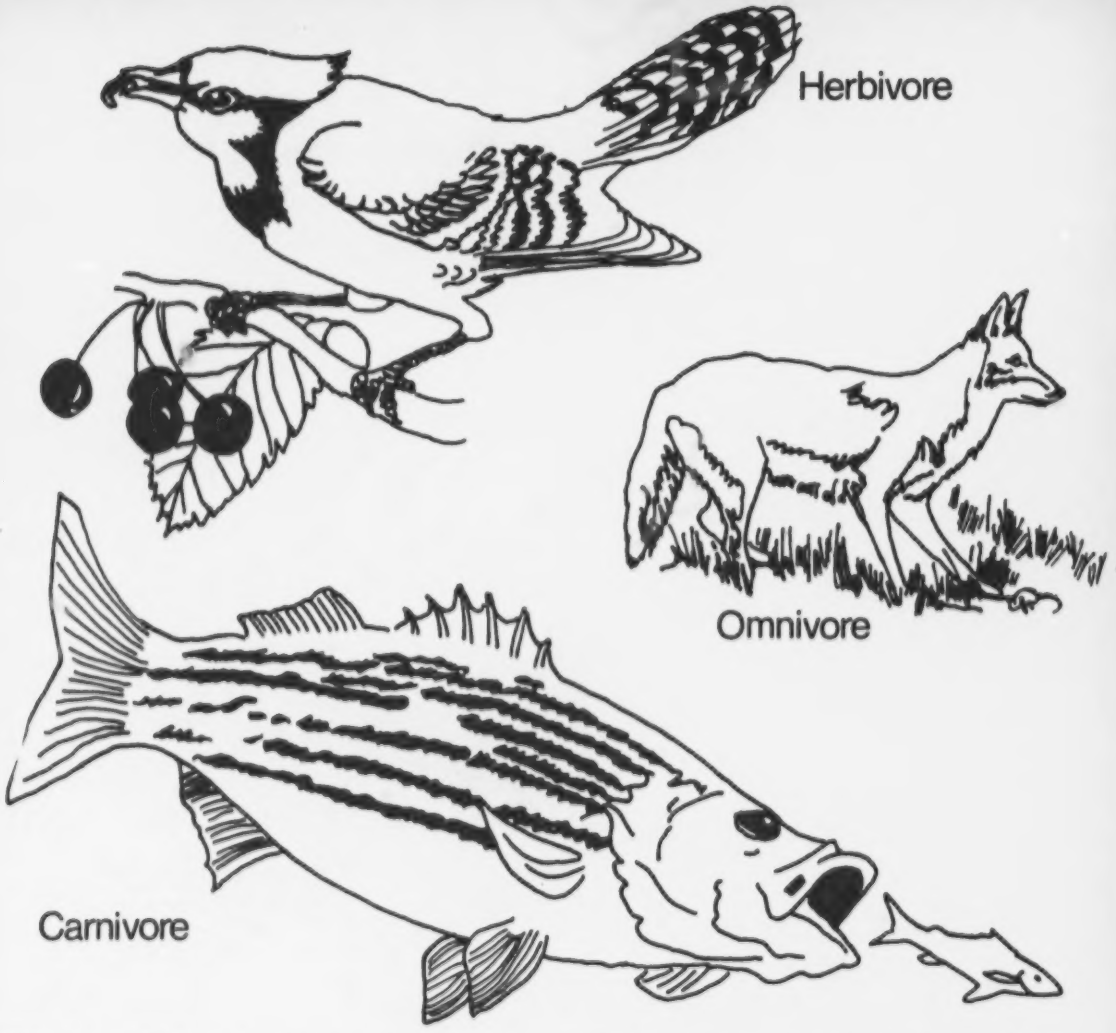
Pronghorn antelope are plant eaters. Sagebrush, grasses, weeds, and other prairie plants are their favorite foods. This mammal runs faster than any other Kansas animal.

Jack Rabbit

Swamp Rabbit

Cottontail

Rabbits eat plants like clover, alfalfa, and grass. **Jack rabbits, cottontails,** and **swamp rabbits** live in Kansas. Jack rabbits are the biggest and fastest of the three.

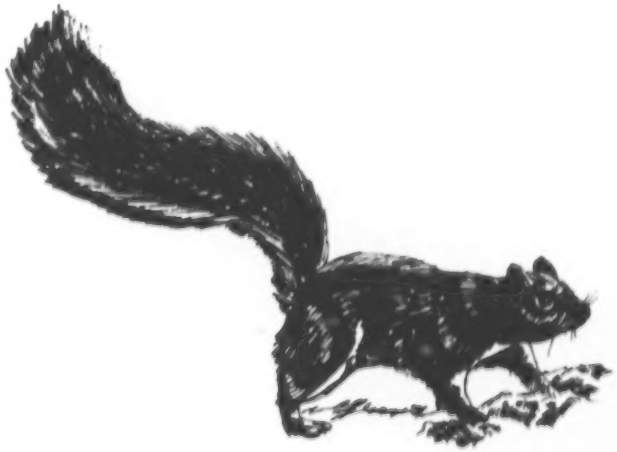


Birds, fish, insects, reptiles, amphibians, and mammals eat a variety of foods. Some of these animals are plant eaters. They are called herbivores. Other animals only eat meat. They are carnivores. Animals that eat plants and meat are omnivores. No matter what they eat or how they get food, wildlife must have food to live.

vocabulary

Some of the words in *Food for Wildlife* may be new to you. See if you know what the words mean now. Find each of these words in the booklet.

wildlife
larvae
insects
mollusks
sense of smell and taste
reptiles
amphibians
mammals
grain
lizard
herbivore
sagebrush
scorpion
hunt
carnivore
omnivore
United States
Asia
scales
whiskers



feast review

You have seen these pictures in *Food for Wildlife.* What are they and what page are they on?

On a separate sheet of paper, pick two of the animals in ***Food for Wildlife.*** Draw the animal's favorite foods and print the animal's name. Draw your favorite foods. Do you eat any of the same foods that wildlife eats?

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